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Edited by A.M. Paul

THE BRITISH PTERIDOLOGICAL SOCIETY

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The BRITISH PTERIDOLOGICAL SOCIETY was founded in 1891 and is still a focus for fern enthusiasts, its wide membership including gardeners, nurserymen and botanists, both amateur and professional. It provides a wide range of information about ferns through its publications and website, and also organises indoor and field meetings, garden visits, a plant exchange, a spore exchange and fern book sales. The Society's journals, *The Fern Gazette*, *Pteridologist* and *Bulletin*, are published annually. *The Fern Gazette* publishes matter chiefly of specialist interest on international pteridology, the *Pteridologist*, topics of more general appeal, and the *Bulletin*, Society business and meetings reports. **Website: www.eBPS.org.uk**

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(**Front cover**: *Ophioglossum vulgatum*, *O. lusitanicum* & *Botrychium lunaria*. Illustration from: Anne Pratt (1855) *The ferns of Great Britain, and their allies the club-mosses, pepperworts, and horsetails*.)

Back numbers of *The Fern Gazette*, *Pteridologist* and *Bulletin* are available for purchase from P.J. Acock, 13 Star Lane, St Mary Cray, Kent BR5 3LJ; E-mail: BackNumbers@eBPS.org.uk

THE

BULLETIN

OF THE

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Vol. 8 2017 No. 4

NATIONAL FIELD MEETINGS

SÃO MIGUEL, AZORES – 6-12 May (Leaders: Tim Pyner & Andrew Leonard)

Introduction **Andrew Leonard**

Tim Pyner and Andrew Leonard had visited São Miguel some 13 years ago in 2004 and used the excellent 1973 article by Wilmanns and Rasbach (*Brit. Fern Gaz.* 10(6): 315-329) as a guide to finding ferns. This BPS meeting was largely a re-run of that previous trip.

Saturday 6th – Ponta Delgada **John Edgington**

After a delayed flight from Stansted, eight of us arrived at Ponta Delgada on the largest island, São Miguel, in light rain that persisted, with sunny intervals and occasional downpours, throughout our visit; the 'Azores high' was in the wrong place! At the Hotel Canadiano, our comfortable base for the week, we were joined by the other five members of the group; heroic efforts by staff at a local restaurant enabled the thirteen of us to eat together on a busy Saturday evening.

Ferning had begun at the airport, in surrounding streets, and in the hotel grounds where we found *Adiantum capillus-veneris* and *Christella dentata* among a total of twelve species in the town. Four of these were introductions. In their 1973 survey of São Miguel's pteridophytes Wilmanns and Rasbach reported that the alien *Cyrtomium falcatum* was 'rarely found in natural habitats'. They looked for, but did not find, *Pteris tremula* and surprisingly did not even mention *Nephrolepis cordifolia*. We found all three in Ponta Delgada itself, with *C. falcatum* and *N. cordifolia* present at most sites we visited across the island, seemingly indifferent to habitat. The native Azorean ferns appear to co-exist with these aliens without detriment to their own populations, as far as we could tell.

Sunday 7th – Pico do Carvão; Lagoa Empadadas & Lagoa do Canário; Miradouro do Cerrado das Freiras & Sete Cidades; Mosteiros **John Edgington**

The Azores are near the mid-Atlantic ridge and are volcanic in origin, with ongoing tectonic activity giving rise to hot springs, some of which we visited during the week. There are active volcanos, though not on São Miguel itself, whose rocks are between two and four million years old. In the morning we drove to Pico do Carvão on the younger west end of the island where the calderas are occupied by many spectacular crater lakes, mostly invisible today through rain and mist. The roadside banks were dominated by *Hedychium gardnerianum* (Kahili ginger, one of the world's most destructive weeds), while the upper slopes were a monoculture of the conifer *Cryptomeria japonica*, planted as a timber tree; throughout the islands, these and other invasive introductions such as *Gunnera tinctoria*, *Hydrangea macrophylla* and *Persicaria capitata* have driven much of the native flora to the point of extinction.

Our first stop was a roadside bank near an old stone aqueduct. *Dryopteris azorica* was our first Azorean endemic, recognised by its frilly look and close resemblance to *D. dilatata* (of which it is one parent). Also on the bank was *Huperzia dentata*, a Macaronesian endemic,

different in habitat (steep, eroding slopes) as well as its dentate leaves from *H. selago*. Plants common to the Mediterranean included *Woodwardia radicans* and *Stegnogramma pozoi*, the latter similar to the alien *Deparia petersenii*, seen later and separated from it, finally, to our leaders' satisfaction. Here, and almost everywhere else, *Selaginella kraussiana* covered the ground (and had sporangia, contrary to Wilmanns and Rasbach's observation). More familiar plants included *Athyrium filix-femina* (a more robust form with short stipes, close to var. *asplenioides*, was seen later), *Struthiopteris spicant* (transferred to its new genus in a recent revision of Blechnaceae), which we found to be common everywhere at higher altitudes, and two rarities in the Azores – *Equisetum arvense* and, on the aqueduct and sheltered from the howling gale at this stop, *Asplenium scolopendrium*.

There was a richer flora around the first crater lake, Lagoa Empadadas, where on a more clement day we'd have sat on the grassy mounds around the natural picnic tables carved from the peat along the shoreline, their sides dense with *S. spicant*. We added *Dryopteris aemula* and *D. affinis*, admired *Diplazium caudatum* and *Culcita macrocarpa* with its huge fronds, some of them fertile, and found our first filmy, *Hymenophyllum tunbrigense*. This turned out to be quite common, on shady banks and epiphytic on *Culcita* stipes and particularly on the trunks of *Cryptomeria* to a height of a metre or more. Andrew spotted sporelings of *Dicksonia antarctica*, which most of us would have missed. The endemic *Polypodium macaronesicum* subsp. *azoricum* was also present but not in large quantities. Shallow water at a larger lake nearby, Lagoa do Canário, hosted extensive stands of *Osmunda regalis* – we had seen this at Lagoa Empadadas but the small difference in altitude translated into much more advanced plants at the second site. Here, too we found *Angelica lignescens*, a giant umbellifer up to three and a half metres high – a splendid endemic plant of craters and ravines, but threatened by habitat loss and alien invasion.

photo: R. Chisu

Andrew Leonard & Bruce Brown looking at ferns on fallen trunk

A brief halt at a viewpoint, Miradouro do Cerrado das Freiras, gave us *Polystichum setiferum* and, for the first time, *Pteridium aquilinum*, which did not seem invasive here. By now the persistent rain drove us to shelter, hot drinks and lunch in a café in the village of Sete Cidades; *Anogramma leptophylla* grew on nearby walls, and Tim found *Asplenium marinum*, oddly, in the churchyard, nearly four kilometres from the sea.

As soon as we left the café, the heavens opened again so we drove to Mosteiros on the coast, where the weather was better. Here we found *Cyrtomium falcatum* perfectly naturalised on the rocky shore – but no *A. marinum*. The coast road back to Ponta Delgada crossed numerous gullies draining the hill country that we had visited in the morning. We added *Equisetum telmateia* and *Adiantum hispidulum*, another introduction, to our list. Several small *Asplenium* plants on roadside walls had the appearance of *A. adiantum-nigrum*, a species notoriously difficult to separate from *A. onopteris*. Subsequently, from their spore size, Tim determined that these wall plants were indeed the former species. Good plants of *A. onopteris*, with large deltoid fronds and caudate pinnae, were seen later, on soil banks rather than walls. Along this road, too we saw another endemic angiosperm,

Luzula purpureosplendens, a woodrush whose showy inflorescence lives up to its name, as well as the Australian tree fern *Sphaeropteris cooperi*, mostly in gardens. The first and wettest day had yielded 33 of the 61 ferns on our hit-list.

Monday 8th – Salto do Cabrito; Lombadas **Bridget Laue**

On a rain-free morning we headed east out of Ponta Delgada. The first stop was to inspect some old walls flanking a quiet country road in the middle of the island, just to the east of Pico do Alho, where Fred Rumsey had reported finding *Asplenium aethiopicum* about twenty years earlier. Andrew, on his previous visit to the Azores, had seen this fern a short distance to the north of here, but failed to find this site. This time the plants were soon spotted. Apparently, these are the only known locations for this species in Europe, the other Macaronesian islands where it is found (Madeira and the Canaries) being considered part of Africa. Also growing on the walls were two endemic ferns, *Asplenium azoricum* and *Polypodium macaronesicum* subsp. *azoricum*, as well as *Asplenium obovatum* subsp. *billotii*, the small but delightful Jersey fern *Anogramma leptophylla*, and the rather more prosaic *Asplenium trichomanes* subsp. *quadrivalens*. *Equisetum telmateia* grew by the side of the road, as did *Selaginella kraussiana*. After explaining to a local farmer that we were looking for ferns, he presented us with some fronds of *Pteridium aquilinum*, for which we looked suitably delighted. Then, as we set off, disaster struck. The third and final car of our convoy ran over a drain cover, blowing *both* right-hand tyres! Luckily, one of the other cars was the same model, so two suitable spare wheels were at hand. Two wheel changes later, two cars headed back to the car rental agency at the airport, while the third (which I was driving) went on ahead as planned.

photo: A. Leonard

***Asplenium aethiopicum* near Pico do Alho**

We continued north-eastwards until near Ribeirinha, before turning southwards on a cobbled road towards Caldeiras. Andrew had apparently reconnoitred this route from home (using Google street view), and he directed us to pull over at an extremely ferny location. Descending to a small river, we found masses of *Deparia petersenii*, *Diplazium esculentum*, *Adiantum raddianum* and *A. hispidulum* growing on the banks. In the same area, competing with the predominant ginger plants, were *Christella dentata*, *Cyrtomium falcatum*, *Diplazium caudatum*, *Woodwardia radicans* and some tree ferns (*Sphaeropteris cooperi*), as well as more familiar species such as *Athyrium filix-femina*, *Osmunda regalis*, *Polystichum setiferum*, *Struthiopteris spicant* and, of course, bracken.

Moving on to Caldeiras we ate our picnic lunch, and watched hot sulphurous water bubbling out of the ground. We found four alien species – *Cyrtomium falcatum*, *Nephrolepis cordifolia*, *Pityrogramma calomelanos*[1] and *Pteris vittata*, all growing on the inner wall of a sulphurous well, and several large *S. cooperi* growing inside a derelict house. The other two cars caught us up, and we returned briefly to the site by the cobbled road, before going on to park at the head of a trail leading to Salto do Cabrito.

This was our main hike for the day, initially alongside a large pipeline before following a trail down into a valley. We passed *Palhinhaea* (*Lycopodiella*) *cernua* growing on banks of earth that were warm to the touch and occasionally had wisps of steam rising, and we added another endemic, *Dryopteris azorica*, to our list, as well as *Adiantum capillus-veneris*, *Blechnum appendiculatum*, *Dicksonia antarctica*, *Equisetum arvense* and *Stegnogramma*

[1] Although *P. calomelanos s.s.* is present in the area, most of the '*calomelanos*' seen on the trip was probably *P. austroamericana*. (F.J. Rumsey)

pozoi. While we saw many other fine ferns they were of the same species seen earlier in the day. Perhaps the most striking were *Pityrogramma calomelanos* with bright powder on the undersides of the fronds, some silver, some yellow; while described in Sue Olsen's book as the 'world-beater' among fern weeds, these plants nevertheless looked handsome here. Retrospectively, from his photographs Tim realised that we had also seen *P. ebenea*.

Some of the party then crossed the river on an open metal footbridge, precarious looking, but in fact sturdy. This structure continued as a walkway above the river as it funnelled through a narrow gorge, before the trail descended via a ladder and then a steep stairway down to pools at the foot of a waterfall; spectacular scenery, but the only new fern was a single *Culcita macrocarpa* spotted on the opposite side of the gorge by Mattan. Returning along a road adjacent to the pipeline, we found *Pteris incompleta* and the colourful *Blechnum appendiculatum*. We also noticed that some of the tree ferns, initially assumed all to be *S. cooperi*, had very dark, even black, trunks and stipes. The consensus view, which was to be strongly reinforced over the coming days, was that some of these plants were in fact *S. medullaris*, while others might be hybrids.

Our final move of the afternoon was to follow southwards a small winding road further up into the hills, which ended at the ruined village of Lombadas in a remote and dramatic setting with tree ferns (all *S. medullaris*) dotted about the landscape. Two lycophytes, *Huperzia dentata* and again *Palhinhaea cernua*, grew by the side of the road, and *Asplenium adiantum-nigrum* was found on the ruined walls. After some exploration along and around the river we had found 19 taxa, but the only other new species added to our list was *Dryopteris affinis*! The accumulated count for the day was 38 species.

Tuesday 9th – Furnas gardens; Lagoa do Congro **Bob & Diana Brown**

Ferners fossicking in remote gullies seems more normal than queueing at the toll booth to pay entrance to public gardens, but this day we acted like the normal public – there were plenty around, enough to make Tim Pyner comment to Andrew Leonard "You mostly talk to strangers." He replied, "Once you get to know people, they're so disappointing."

photo: B.N. Brown

Diana Brown dwarfed by *Angiopteris evecta* at José do Canto Forest Garden, Furnas

The first garden we visited, José do Canto Forest Garden at da Lagoa das Furnas, was on the south side of the lake, extending up the hillside from the peripheral lakeshore road. Most of the garden was informal apart from conventional plantings between the entrance and a chapel. With limited time the group divided, some heading left to what they described as an impressive waterfall. The remainder headed right to the fern garden. Since the Azores as a whole might be thought of as one big fern garden, to have a designated garden promised great delights. I was initially struck by the size of the specimen trees, which included a *Cordyline australis* masquerading as a forest tree. However, as well grown and imposing as the trees were, they were smaller than the massive trees that we would see in Terra Nostra garden. The highlight for me was to stand amongst the fronds of *Angiopteris evecta*, which might be the most impressive fern that I have ever seen.

The following were all noted: *Adiantum capillus-veneris*, *A. hispidulum*, *Angiopteris evecta*, *Asplenium adiantum-nigrum*, *A. onopteris*, *A. scolopendrium*, *Athyrium filix-femina*, *Cibotium glaucum*, *Cyrtomium falcatum*, *Deparia petersenii*, *Dicksonia antarctica*, *Diplazium caudatum*, *Dryopteris azorica*, *Hymenophyllum tunbrigense*, *Polypodium azoricum*, *Polystichum setiferum*, *Pteridium aquilinum*, *Pteris incompleta*, *Selaginella kraussiana*, *S. moellendorfii*, *Sphaeropteris cooperi*, *S. medullaris*, *Struthiopteris spicant* and *Woodwardia radicans*.

The gardens at Terra Nostra teemed with visitors. It was very wet when we went in, which was a wonderful opportunity for Andrew to talk to other sheltering groups of people. The garden was begun in about 1775 by Thomas Hickling, an American settler who had come to São Miguel to grow oranges commercially. Somehow this historical fact captivates you even before you have visited. Americans are historically not much known for creating gardens and to do so at such an early date in the Azores seems especially remarkable. The garden survived thanks to keen gardener the Viscountess da Praia whose husband bought the estate in 1848, and to later owners. A number of English gardeners were employed and the gardens were extended and exotic species imported. More recently the gardens were renovated by David Sayers and Richard Green in the 1980s and 1990s.

The raison d'être for the gardens is a myriad of cold and hot water springs that were used in lakes, canals and ponds, and there is a small fast flowing river. There is public bathing too in a large pool in front of the mansion. It was so wet during our visit that the idea of being rained on in a bathing suit and warming up in a lake was especially appealing. I was especially entranced by the cycad garden, set in a hollow surrounded by a high hedge with a fascinating collection of 85 different species and subspecies. There were ferns everywhere, not just in the designated fern garden, which meant it could boast of having over 300 varieties – some naturalised, some native and many subtropical exotics. Genera represented that we did not see in the wild included: *Angiopteris*, *Campyloneurum*, *Cibotium*, *Davallia*, *Didymochlaena*, *Goniophlebium*, *Lophosoria*, *Lygodium*, *Matteuccia*, *Microlepia*, *Niphidium*, *Onoclea*, *Pellaea*, *Phlebodium*, *Psilotum*, *Rumohra*, *Sadleria*, *Stenochlaena*, *Thelypteris*, *Todea* and *Woodsia*.

The garden's greatest asset is space – something I imagine BPS members rarely have, the best spaces being in the oldest part of the garden where you can look across water to distant groups of tree ferns among gigantic trees. Elsewhere was a wonderful avenue lined with magnificent Australian king palm trees (*Archontophoenix cunninghamiana*). One of the most impressive trees was the New Zealand rata (*Meterosideros excelsa*) at the entrance – so large that it was impossible to photograph the whole of it, and there were hundreds of other immense trees, each an entire ecosystem in its own right covered in mosses, lichens and epiphytic ferns.

A detour was made en route back to the hotel to visit a small lake, Lagoa do Congro, NNE of Vila Franca. Here were impressive plants of *Vandenboschia speciosa* both in a pendulous form and upright plants growing on the ground.

photo: B.N. Brown

Tim Pyner above bank of *Vandenboschia speciosa* at Lagoa do Congro

Mature plants of *Stegnogramma pozoi* with mature sori were also seen, and a short diversion along a woodland ride led us to some fine plants of *Asplenium scolopendrium* and young sporelings of *Culcita macrocarpa*.

Wednesday 10th – Pico da Vara **Mike Canaway & Mattan Schout**

At 1,103 metres, Pico da Vara is the highest summit on the island of São Miguel. Rainfall increases greatly with altitude and we arrived at the foot of the mountain in steady rain to find a well signposted trail leading upwards through *Cryptomeria japonica* plantations. Once in the woodland we soon began to encounter local ferns as listed in the table but notable highlights seen at first included *Culcita macrocarpa*, *Stegnogramma pozoi* and *Woodwardia radicans* as well as the Azorean endemics *Ilex perado* and *Vaccinium cylindraceum*, which added to the interest. Passing a slippery slope Tim Pyner spotted an unusual-looking *Huperzia* showing annual growth segments, which on further investigation turned out to be *H. suberecta*. As the forest began to thin out we saw many young plants of *Dicksonia antarctica*. The *Dicksonia* proved to be abundant, although remaining small and rather scruffy. They obviously survive and multiply effectively but suffer from the exposed location. Eventually the woodland gave way to open heathland with further *H. suberecta* and small plants of *C. macrocarpa*.

photo: A. Leonard

Bruce Brown beside *Dicksonia antarctica* at Pico da Vara

The summit was marked by a stone monument that we reached in cloud but we were rewarded by seeing good clumps of *Hymenophyllum wilsonii* growing epiphytically on *Juniperus brevifolia* a short distance away. After taking lunch at this point we returned by the same route with occasional clearances and sunny intervals that allowed the cameras to come out to record the views over the island. Most of the party then returned to the hotel directly whilst a small group took a more indirect route around the eastern end of the island as follows.

Driving near the coast we stopped near the entrance to a botanic garden (which was by now closed) between São Pedro and Nordeste. The entrance to the garden itself was marked by a stand of *Nephrolepis cordifolia* and on a nearby road bridge were *Adiantum capillus-veneris*, *Blechnum appendiculatum* and *Christella dentata*. On an embankment nearby were *Anogramma leptophylla*, *Adiantum hispidulum* and *Polypodium azoricum*. A further 15 minutes' drive southwards took us to a promising roadside embankment and woodland edge where there were excellent stands of *B. appendiculatum* and further rather photogenic plants of *Christella dentata* on the embankment, as well as some *Pteridium aquilinum* in the woodland edge and large stands of *Woodwardia radicans* further into the wood at the base of a cliff. Although we stopped again there were no further finds to report, although a brief tour of the fumaroles, hot springs and mud pots at Furnas were worth a visit in the gathering dusk before returning to Ponta Delgada.

Thursday 11th a.m. – Caldeira Velha **Tim Pyner**

We arrived at our intended first site, Lagoa do Fogo, to find it shrouded in thick fog so we decided to reverse our plans for the day and descended to the hot springs at Caldeira Velha a short drive towards the coast. Fortunately at this lower altitude the fog had largely disappeared to be replaced with light rain. Caldeira Velha is located in a small valley with a stream and a series of hot springs and warm and cool ponds. I had previously visited this site in 2004 and at that time it was a quiet area used mainly by locals, and bathing in the hot springs was very peaceful. So it came as quite a shock to find that the tourist industry has 'discovered' the springs. There is now an entrance fee, constructed paths, a visitor centre and coach loads of tourists. It is a matter of debate whether increased access by curious visitors has some educational value or whether the commercial exploitation of a lovely, secluded site is rather disheartening. I know how I feel. Some of our group ventured into the hot springs to bathe but I preferred to explore for ferns.

photo: B.N. Brown

Bathing in the hot springs surrounded by tree ferns at Caldeira Velha

The main interest at this site was the extraordinary quantity of scaly tree ferns that have found the warm, humid conditions perfect and have fully naturalised. Both *Sphaeropteris cooperi* and *S. medullaris* were growing here along with an abundance of variable intermediates. Some individuals were many metres tall with huge crowns of fronds. The unadulterated species were easily identifiable – the black stipes and scales of *S. medullaris* originating from New Zealand being very different from the greenish stipes and pale scales of the Australian *S. cooperi*, and it is not often realised that they are in fact closely related and probably originate from a common ancestor. However, most plants in this area showed intermediate characters and it was impossible to place many plants into a species. I collected several pinnae to study the micro scales found on the under-surface to try to understand how the intermediates differ from the parents. I intend to report my findings more fully in due course. [Sadly this was not to be, but Tim had been liaising with Fred Rumsey about these plants and Fred plans to publish the hybrid, naming it in Tim's memory.]

The tree ferns here provide an atmospheric setting the like of which probably occurs nowhere else in Europe. Regrettably, but perhaps understandably, they are being gradually removed, maybe to try to limit their spread into the wider environment. However, given that São Miguel has lost most of its natural vegetation it does seem that tree ferns are a relatively minor problem compared with some of the invasive angiosperms and are being unfairly targeted. Alongside the naturalised tree ferns the native *Culcita macrocarpa*, *Diplazium caudatum* and *Dryopteris azorica* were abundant. *Palhinhaea cernua* seemed to

prefer the hottest spots, almost touching some of the bubbling mud pools. Other naturalised ferns finding the conditions perfect included *Dicksonia antarctica*, *Pityrogramma calomelanos*, *P. ebenea*, *Pteris tremula*, *Deparia petersenii* and *Adiantum hispidulum.*

Thursday 11th p.m. – Lagoa do Fogo **Razvan Chisu**

By lunch-time the wind had blown away the thick fog and after a quick sandwich break in the car park overlooking Lagoa do Fogo we were able to admire the views and catch a glimpse of the blue waters down in the former crater. This is the island's youngest volcano, with the last recorded eruption having taken place in 1563. The lake is now about three kilometres in diameter and 30 metres deep.

The path wound down a steep slope through shrubs and ferns (thankfully the ever-present invasive *Hedychium gardnerianum* had not managed to obliterate the native vegetation, perhaps due to the higher elevation). Most of the path consisted of wooden steps, which helped us negotiate the wet, slippery soil. I wonder though what giants built them, as the steps were at least twice the height of standard ones. Along the path we saw the ubiquitous *Struthiopteris spicant*, Christmas tree-like *Palhinhaea cernua*, *Dryopteris azorica* and sporelings of *Sphaeropteris medullaris*. Due to the open aspect, plants of *Culcita macrocarpa* had a shorter, crispier habit and more yellow-tinged fronds than those in the *Cryptomeria* plantations. Also growing among the native *Laurus azorica* and *Myrsine africana* shrubs were *Huperzia dentata* and *Pityrogramma calomelanos*.

It took us less than 40 minutes to get to the lake shore (at 575 metres), where we found more sporelings of *Sphaeropteris cooperi*, and *Hymenophyllum tunbrigense* growing at the base of *Cryptomeria* trunks. Several of us walked for a while along the shore. However, a large seagull colony was nesting near a secondary, smaller lake and having walked too close, the gulls began to make loud noises and dive down menacingly, ever closer, forcing us to retreat. A huge population of *Osmunda regalis* grew in the shallow water nearby.

The weather had kept improving throughout the afternoon so we decided to head northwards again towards the coast for a drink in the sun in the quaint main square of Ribeira Grande. The main party then went back to the hotel, while some of us in Tim and Andrew's car continued to stop at various places along the way back to Ponta Delgada for more car-ferning and stone-wall inspections. We found the usual suspects: *Anogramma leptophylla*, *Asplenium trichomanes*, *A. obovatum* subsp. *billotii* and also the much less common *A. azoricum* and *A. marinum*.

Friday 12th – Ponta Delgada; Pico Verde; Nordeste **Paul Spracklin**

This was our last day in the field here in Teletubby Land – my nickname for São Miguel upon seeing the landscape full of green bumps – and it started with a bang. Following one of his 'off-duty' meanderings, Raz had reported seeing something interesting growing on the outside of the cemetery wall, so our first job of the day was to check it out. Sadly Mike was unable to join us due to '*problemas estomacais*', and due to a misunderstanding Bridget's car-load didn't actually have the location, so missed all the fun, but the rest of us parked in the usual spot for the supermarket and walked back. I followed on up the alleyway to find the others excitedly examining a section of the wall that boasted, amongst all the 'usual wall ferns', a small colony of *Asplenium ceterach* – exciting not just because it was the first sighting on this trip but because it had not been recorded on the island before. The species count for this site was nine ferns. I was later distracted by seeing a naturalised *Bocconia* species, a Mexican shrub that is rarely seen in cultivation, let alone as an escapee.

The next item on the agenda was to ascend to the top of Pico Verde, so we drove across the island to the mountain road that led part of the way up through dense forest. However, after a little 'backwards-and-forwardsing' it became clear that what looked on the map like a

track heading to the peak must have been a boundary marker as no track was to be found in the steep terrain. I wasn't feeling too well so had a sleep in the car whilst everyone else did some roadside botanising, stopping for lunch on the way. The species count was 20, including our first sighting on the trip of *Asplenium monanthes.*

Next we headed towards the north-east coast, stopping at the roadside by some abandoned farm buildings to see what we could see; 11 species were recorded. The unfeasibly cute town of Nordeste offered some light refreshment before we turned back eastwards along the coast road towards the town of Algarvia. Our last stop for the day was along a stretch of road in the shadow of a beautiful modern viaduct that spanned the gorge of interest to us. The species count along the road cuts and walls was 23, including our first sighting of *Doodia caudata* for the trip. The gorge itself boasted some fine tree ferns that seemed to be *Sphaeropteris medullaris* with perhaps a dash of *S. cooperi* in the genes. Bruce, our recorder for the day, made the final tally a respectable 38 taxa.

photo: R. Chisu

The final dinner

Paul Spracklin, Bruce Brown, Mattan Schout, Tim Pyner, Diana Brown, Paul Sharp, Bob Brown, Bridget Laue, John Edgington, Andrew Leonard, Razvan Chisu, Sylvia Martinelli

(*Not in photo:* Mike Canaway)

Postscript **Andrew Leonard**

The advent of budget airlines to the Azores have increased tourism and São Miguel now has a similar feel to Madeira and Tenerife. When we last visited, it was a much quieter place and we felt like privileged visitors to an exotic and largely undiscovered island. However, the ferns do not seem to have suffered and, by and large, we saw many of the ferns that Wilmanns and Rasbach described.

A remarkable difference was that *Sphaeropteris cooperi* was doing less well and diminishing in numbers but *S. medullaris*, seemed to be healthy and on the increase. *Elaphoglossum semicylindricum* had also declined and we saw only a few plants on the path up to Pico da Vara. *Elaphoglossum* used to be common on the old rhizomes of *Culcita macrocarpa* in the *Cryptomeria* plantation. Now the *Cryptomeria* seems to have shed its lower branches, creating a dense understorey to the detriment of the *Culcita* and destroying the habitat for *Elaphoglossum*. The roadsides of the coastal roads are still interesting for a number of weedy and introduced ferns but we did not see *Asplenium hemionitis* at all and we saw only one plant of *Asplenium monanthes*, on the roadside to Pico Verde.

A total of 53 ferns and lycophytes were seen at wild sites during the week, including four not on our target list. Only twelve species eluded us: *Asplenium hemionitis*, *Cheilanthes viridis*, *Cystopteris diaphana*, *Diphasiastrum madeirense*, *Dryopteris crispifolia*, *Equisetum ramosissimum*, *Lycopodiella inundata*, *Nephrolepis exaltata*, *Onychium japonicum*, *Ophioglossum lusitanicum*, *Pteris cretica* and *P. multifida.*

Ferns seen at wild sites in São Miguel, Azores, May 2017

A Pico do Carvão - roadside bank & aqueduct (600 m)
B Lagoa Empadadas (741 m) & Lagoa do Canário
C Miradouro do Cerrado das Freiras (530 m) & Sete Cidades (270 m)
D Mosteiros; roadside gullies on coast road (100 m)
E Roadside wall near Pico do Alho
F Cobbled road to Caldeiras & Caldeiras
G Trail to Salto do Cabrito
H Lombadas
I Lagoa do Congro
J Pico da Vara
K Roadside sites São Pedro to Nordeste & down east coast road
L Caldeira Velha
M Lagoa do Fogo
N 4 sites along north coast & back to Ponta Delgada
O Ponta Delgada - wall adjacent to Cemetery
P Forest road below Pico Verde
Q Roadside on descent to Nordeste
R North coast road - 3 sites between Nordeste & Achada

	7th				8th				9th	10th		11th			12th			
	A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**Q**	**R**
Adiantum capillus-veneris							+				+			+	+			+
A. hispidulum				+		+	+		+		+	+				+		+
A. raddianum						+	+											+
Anogramma leptophylla			+		+						+			+	+		+	+
Asplenium adiantum-nigrum				+				+							+		+	+
A. aethiopicum					+													
A. azoricum					+			+						+				
A. ceterach															+			
A. marinum			+											+				
A. monanthes																+		
A. obovatum subsp. billotii					+									+			+	+
A. onopteris				+														
A. scolopendrium	+		+						+									
A. trichomanes subsp. quadrivalens					+			+						+				+
Athyrium filix-femina	+	+				+	+	+		+	+	+	+			+	+	+
Blechnum appendiculatum							+				+						+	+
Christella dentata						+					+							+
Culcita macrocarpa		+					+	+	+	+		+	+			+		
Cyrtomium falcatum	+		+	+		+	+	+			+			+	+		+	+
Deparia petersenii		+		+		+	+	+			+	+						+
Dicksonia antarctica		+					+			+		+	+			+		
Diplazium caudatum		+		+		+	+	+	+		+	+						+
D. esculentum						+												
Doodia caudata											+							+
Dryopteris aemula		+							+	+			+			+		
D. affinis		+						+	+	+						+		
D. azorica	+	+					+	+	+	+		+	+			+	+	+
Elaphoglossum semicylindricum										+								
Equisetum arvense	+						+											
E. telmateia		+		+	+			+										+
Huperzia dentata	+		+					+		+			+			+		
H. suberecta										+								
Hymenophyllum tunbrigense		+							+	+			+			+		
H. wilsonii										+								

	7th				8th				9th	10th		11th			12th			
	A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**Q**	**R**
Nephrolepis cordifolia	+	+	+	+		+					+				+			+
Osmunda regalis		+				+	+	+	+	+	+	+	+			+		+
Palhinhaea (Lycopodiella) cernua			+				+	+		+		+	+			+		
Pityrogramma calomelanos / austroamericana						+	+					+	+					
P. ebenea							+					+						
Polypodium macaronesicum subsp. azoricum		+		+	+				+		+			+	+			+
Polystichum setiferum			+			+								+		+	+	
Pteridium aquilinum			+	+	+	+	+	+		+	+		+	+		+	+	+
Pteris incompleta																+		
P. tremula												+			+			
P. vittata						+									+			
Selaginella kraussiana	+	+		+	+	+	+	+		+	+	+	+	+		+	+	+
Sphaeropteris cooperi				+		+	+				+	+	+					
S. cooperi × medullaris												+						
S. medullaris							+	+	+	+		+	+			+		+
Stegnogramma pozoi	+	+					+		+	+						+		
Struthiopteris (Blechnum) spicant	+	+	+	+		+	+	+	+	+	+	+	+			+	+	
Vandenboschia (Trichomanes) speciosa									+									
Woodwardia radicans	+	+	+			+	+	+	+	+	+	+	+			+		+

THE NORTH OF IRELAND – 6-9 July

Hazel Metherell *et al.*

When I first planned this trip, I had thought that three days would be enough. We then, via the BPS, got invitations to other sites, so we had to add on a 'Day 0' at the beginning.

Day 0 (Thursday 6th) – Belfast

We met up at the home of Margaret and John Kennedy, a lovely house with an extensive garden on the slopes overlooking Belfast Lough. We were plied with home-made cakes and tea before being let loose to explore. The top part of the garden was neatly manicured with scenic rockeries, lawns and borders. Amongst the planting were many interesting fern varieties, particularly of *Polystichum* and *Polypodium*. The lower part was a jungle of trees, shrubs, and many large ferns including tree ferns, ostrich fern (*Matteuccia struthiopteris*) and many *Dryopteris*, as well as banks of beech fern (*Phegopteris connectilis*). The side of the garden was a hidden natural valley with stream and arching fronds. ("I have a bad case of ravine envy." Helena Crouch) We spent several hours investigating and admiring the garden. The surprisingly mild micro-climate meant that many species were thriving outdoors that might normally be expected in greenhouses.

Margaret had also invited other keen gardeners and plants people to gain interest in starting a Northern Ireland fern group. Thanks to her for her hospitality and enthusiasm.

We had to dash away without finishing all the cakes, to get into Belfast, as we had been invited by the Director of the Belfast Botanic Gardens to see around their collections. They too are keen to build links with the BPS, and have a large range of interesting ferns. Their main ferny greenhouse (the Ravine) was being renovated, so many of their specimens were being stored and cared for in other greenhouses behind the scenes. We had a welcome from the Director, and some of the staff and Friends Group were also there. There were many tree ferns and large specimens, with the root balls well wrapped, in the works glasshouses,

as well as medium ones in flowerbeds and smaller ones in the other display greenhouses. The highlight was undoubtedly the Bog Garden. The old Ravine House held a healthy population of Killarney ferns (gametophytes and sporophytes) that needed to be moved to somewhere suitable during the building works. Fred Rumsey had visited a couple of years previously to help them find the best spot. It turned out to be the old outdoor staff toilet block! It was cool, damp and so dimly lit that it took a while for your eyes to acclimatise from the bright sun outside. They named it The Bog Garden, and had two decorative loos with potted ferns by the entrance.

At the risk of teaching my grandmother to suck eggs... Killarney fern is unusual in that the gametophyte stage, rather than being a small heart-shaped temporary structure, is a fuzzy mass of green fibres. These can continue growing, albeit slowly, for decades until some unknown stimulus might trigger the production of the male and female reproductive structures and the eventual growth of the sporophyte fronds. They are very poor competitors and the gametophyte is often found in places where the sporophyte is not known.

Day 1 (Friday 7th) – Glenariff Forest Park, County Antrim

The next morning we headed to Glenariff Forest Park, about an hour north of Belfast. We parked at the lower end of the Waterfall Walk, and went in small groups up the paths with boardwalks and bridges up the sides of the steep ravine. It is a beautiful place and we counted about 16 species of ferns as we went up. These included a foliose form of *Polystichum setiferum* and a *Dryopteris borreri* identified as forma *rhombidentata* by Roger Golding. After lunch at the top, we came back down the same way, pointing out any species that other groups may have missed. As usual the *Hymenophyllum wilsonii* was easily walked past, but was one of the highlights, clinging to a rock surface just above a large waterfall. The Killarney fern (*Vandenboschia speciosa*) gametophyte needed Fred Rumsey to find it and a strong torch shone into a rocky cleft for us to see it. Other ferns noted during the day were *Asplenium scolopendrium*, *A. trichomanes* subsp. *quadrivalens*, *Athyrium filix-femina*, *Dryopteris affinis*, *D. borreri*, possible *D. cambrensis*, *D. dilatata*, *D. filix-mas*, *Equisetum arvense*, *E. sylvaticum*, *E. telmateia*, *Oreopteris limbosperma*, *Phegopteris connectilis*, *Polypodium cambricum*, *P. vulgare*, *Polystichum aculeatum*, *Pteridium aquilinum* and *Struthiopteris* (*Blechnum*) *spicant*.

We then set out to drive to Donegal town for the next stage.

Day 2 (Saturday 8th) – County Donegal

We met up with Ralph Sheppard, the BSBI recorder for Donegal, and Robert Northridge, recorder for Fermanagh, and his wife Hannah. Ralph led us in convoy to Ardnamona Wood by Lough Eske (G9684). This nature reserve was boggy ancient oak forest, with modern gravel paths making access easier. The number and splendour of the ferns was stunning. ("Quite the most fern-rich and beautiful site I've ever visited." Paul Ripley) Many of the trees and rocks were covered by *Hymenophyllum*, with both species present, though *H. wilsonii* was the more frequent, and luxuriant on tree trunks. Large *Dryopteris aemula* between the trees and stately shuttlecocks of the *Dryopteris affinis* group soon had the *affinis* enthusiasts drooling – *D. borreri*, *D. cambrensis* and *D. affinis* were all noted, including a possible subsp. *kerryensis* according to Roger. We made our way down to the lakeshore edge through a carpet of golden cow-wheat (*Melampyrum pratense* var. *hians*) to be shown a stand of *Equisetum* × *trachyodon*, and there was also *Osmunda regalis* and *Polypodium vulgare* looking rather like *P. interjectum*. Ralph then led us off the path to a damp bluff, with wild Killarney fern (*Vandenboschia speciosa*) growing in drooping cascades. Aficionados looked closely at the clonal differences between populations, comparing these with the Belfast specimens. Other ferns seen were *Dryopteris carthusiana*, *D. dilatata* and possible *D.* × *deweveri*, *Athyrium filix-femina*, *Struthiopteris spicant*, *Oreopteris limbosperma*, *Polystichum*, including a crested form, *Phegopteris connectilis*, *Equisetum arvense*, *E. sylvaticum*, *Asplenium adiantum-nigrum* (otherwise rare) and *Pteridium aquilinum*.

photo: H.M.K. Metherell

BPS members in Co. Donegal

Back row: Andrew Leonard, Roger Golding, Pat Acock, Fred Rumsey, Helena Crouch, Martin Rickard, Alison Evans, Paul Ripley, Val Dennison, Tim Pyner, Jim Dennison, Ralph Sheppard
On bench: Rosalind MacNeice, Grace Acock, Pam Simpson, Lindsey Holleworth, Margaret Kennedy

(*Not in photo:* Chris & Hazel Metherell, Robert & Hannah Northridge)

After lunch we loaded in the convoy again, and went first to a glorious cove between Traloar look-out and Muckros [G621744] with blue skies, golden sands, hardly any people, impressive dripping sea-cliffs festooned with *Adiantum capillus-veneris* and a shallow cave with a curtain of *Asplenium marinum*. If anything was an advert to come back to Donegal, this was it!

We went on to Kiltyfanned (G5888) a small freshwater lough where, somehow, Robert and Hannah had discovered not only tiny adder's-tongues (*Ophioglossum azoricum*) by the roadside, but also pillwort (*Pilularia globulifera*) at the lake margin! The group continued to the abandoned settlement at the end of the road, where splendid views of the ocean greeted us. Ralph, Fred and Helena tarried, taking the opportunity to do some square-bashing for the BSBI Atlas 2020 and were rewarded with a few more small plants of *O. azoricum* (and *Euphrasia foulaensis* new to Ireland).

photo: F.J. Rumsey

***Ophioglossum azoricum* site, Co. Donegal**

Andrew Leonard, Roger Golding, Pam Simpson, Hazel Metherell, Alison Evans

Our thanks to Ralph for his help and patience, as herding pteridologists in such wonderful places is a challenge.

Day 3 (Sunday 9th) – Lough Navar Forest Park, County Fermanagh

A car park in the Lough Navar Forest Park (H0754), close to the entrance to the Correl Glen Nature Reserve, was our meeting place with Robert and Hannah, who had agreed to lead us for the day. (Well most of us met here – some had a car problem and joined us later.) Our first site was just over the road and into the head of the Correl Glen. A short delve into a stream-side path allowed Robert to give an overview of the Fermanagh geology and how it influences the flora. There just happened to be some ferns there too! The quality of the habitat was rapidly apparent as the brave got to savour the sweet scent of pine marten poo by the trackside. The common woodland ferns of acid substrates were duly noted; we had almost become blasé about *Dryopteris aemula* by this point! *Cystopteris fragilis* and *Asplenium scolopendrium* were noted on the mortared bridge wall as we made our way back to the cars.

We moved off northwards in convoy along the Forest Drive, our next stop some rock-faces close to the road, which yielded the gametophyte of *Vandenboschia speciosa* in shaded crevices.

Our next stop, with the promise of *Huperzia*, was a north-facing scarp west of Letter Lough (H0656). Sadly the clubmoss eluded us but those with an interest in angiosperms were rewarded by several flowering patches of serrated wintergreen (*Orthilia secunda*), a particular feature of these Lough Navar scarps. *Hymenophyllum wilsonii* was noted on the rocks and *Dryopteris carthusiana* was located on boggy ground amongst trees near the roadside.

Continuing northwards we made our way to the top of the impressive Cliffs of Magho (H0557) The cloud-base had gradually lowered, so by the time we got to the panoramic viewing point, Robert could only describe in the mist and drizzle what we ought to be seeing! Lunch was taken by most in their cars, but the intrepid who took to the cover of the trees were rewarded by views of the diminutive lesser twayblade orchid (*Neottia cordata*). Fed and watered, we made our way westwards along the cliff top until we came to a grassy slumped area where disturbance had seen colonisation by an impressive stand of a splendid horsetail, the identity of which was the subject of debate. It proved to be *Equisetum pratense* (confirmed later by Marcus Lubienski) but its unusual degree of secondary branching had led to the hope it might be *E.* × *mildeanum*, since *E. sylvaticum* was growing close-by.

photo: H.M.K. Metherell

***Polystichum lonchitis*, Co. Fermanagh**

Returning to the cars we headed on anti-clockwise on the Forest Drive. A lengthier stomp through some impressive and species-rich boggy areas brought us to another set of rocky scarps at Braade (H0555), home to holly fern (*Polystichum lonchitis*). This had first been found by Hannah many years before, the tricky damp ascent then made, we were told, while she was carrying a toddler in a backpack! The ledges, clearly of a more base-rich nature, also supported *Asplenium viride* and the Irish eyebright (*Euphrasia salisburgensis*). An interesting *Dryopteris* with some similarities to the Scottish *D. cambrensis* subsp. *pseudocomplexa* was puzzled over and collected for the proposed molecular study of this group. Other ferns recorded here were *Dryopteris carthusiana*, *D. affinis*, *D. dilatata*, *D. cambrensis*, *D. aemula*, *D. filix-mas* and *Osmunda regalis*.

How to better one of the few Irish sites for holly fern? The answer for many was our final stop at an impressive sandstone scarp south-west of Lough Achork (H0355), the most inland British and Irish site for *Asplenium marinum*, here over 21 kilometres from the

nearest coast. Crossing the rutted, boggy brash-covered ground to get to the cliffs proved tricky, so some opted not to venture! They missed a treat, the spleenwort in abundance in sheltered pockets on the cliff-face with small plants of *Asplenium adiantum-nigrum* and a *Polypodium* that proved to be *P. interjectum*. *Asplenium ruta-muraria* and *A. trichomanes* were located nearby. *Dryopteris aemula*, *D. dilatata*, *D. carthusiana* and *D. borreri*, including possibly the form "*lacunosa*" were recorded. Huge boulders below the cliffs closer to our parked cars supported good patches of *Hymenophyllum tunbrigense* and an attractive lichen *Sphaerophorus globosus*, its greyish fanned branches tipped with globose blackish apothecia. Nearby were found a few clumps of the sedge hybrid *Carex* × *boenninghausiana*, not recorded in Fermanagh for over 50 years! It proved an exciting end to a glorious day, made possible by the generosity of Robert and Hannah, who shared their time, expertise and treasures with us. Our grateful thanks goes to them as they were also extremely helpful in the planning stages of this trip.

The only European site recorded for *Polystichum* × *lonchitiforme* (*P. lonchitis* × *P. aculeatum*) is at nearby Glenade, along with other alpine ferns such as holly fern, *Asplenium viride* etc. Unfortunately it is on steep scree slopes that are not open access ground, and so we could not organise an official visit to see them.

Many thanks to those meeting participants that contributed information to this report.

KINDROGAN FIELD CENTRE, PERTHSHIRE – 17-20 July

(*Participants:* Mike Canaway, Brian & Sue Dockerill, John Edgington, Mary Gibby, Martin Godfrey, Vanessa Griffiths, David Hill, Bridget Laue, Heather McHaffie (*leader*), Chris Nicholson, Paul Ripley, Fred & Sue Rumsey, Ian Schoolar, Paul Sharp.)

Monday 17th – Spittal of Glenshee (Perthshire, Aberdeenshire & Angus) David Hill

Following a hearty porridge and cooked breakfast, thirteen of us assembled in the car park at Kindrogan for what promised to be a glorious day in the hills. Sharing transport, we re-assembled in a lay-by next to the Old Military Road running through the spectacular Gleann Beag (37/1312.7500). There we were joined by Peter and Liz, two FSC (Field Studies Council) tutors daring to delve into the mysterious world of plant hunting, and Les Tucker, a local botanist with mountain-goat-like speed across the terrain.

The first fern found was *Gymnocarpium dryopteris*, and scattered amongst the heather were the strobili of *Lycopodium clavatum*, quite noticeable even from a distance. In glorious sunshine we started to move up the flanks of Creag nan Eun. A Loch Tay Precambrian limestone boulder (37/1316.7519) attracted our attention as we worked up the heather-covered hillside. On the top was a *Polypodium vulgare s.l.*, and beneath sheltered a clump of *Cystopteris fragilis*. Half a dozen sheep fled before the encroaching pteridologists, but blissfully low numbers compared to the hillsides of North Wales. We worked slowly up small boulder-strewn mires, with patches of *Selaginella selaginoides* hinting at some base enrichment with further potential treasures ahead. Small clumps of *Saxifraga aizoides* (yellow saxifrage) provided the perfect contrast to the flowering heathers. More *Cystopteris* was found, this time with *Asplenium viride* and *A. ruta-muraria* (37/1306.7529). Higher still, a small amount of *A. trichomanes* was found.

Continuing our ascent the boulders became more substantial, offering shelter to *Oreopteris limbosperma* and the occasional *Polystichum aculeatum*, and higher still *P. lonchitis*. The holly fern had impressive sized fronds that had escaped the predations of woolly maggots (although nothing compared in size to those that we would see in Caenlochan Glen two days later). Between the rocks *Alchemilla alpina* (alpine lady's-mantle) could be found, along with occasional mountain hare droppings. On top of an exposed jagged boulder, the unusual lichen *Umbilicaria cylindrica* var. *fimbriata* showed apothecia, not something seen very often.

A small group headed up the cliff to try and reach a terrace with a large clump of *Dryopteris*, but to no avail; we sensibly decided that it was too early in the trip to risk falls!

As we spread out across the hillside a large patch of *Phegopteris connectilis* was found, running through a patch of stabilised and overgrown scree.

We descended through heather flowers, stopping to take in the moraine-filled glen with winding road and, beyond, the sparkling waters of Allt a' Ghlinne Bhig. Nearing the lower slopes a stunted but finely branched *Equisetum sylvaticum* and *Athyrium filix-femina* were discovered hiding amongst the low vegetation (37/1304.7524).

Continuing down, another small patch of *Gymnocarpium dryopteris* was found, along with *Equisetum arvense* (37/1328.7510) and finally *E. variegatum* (37/1329.7511) on the riverbank below the road. As the day continued to warm, we stayed by the river to enjoy a brief lunch. Wandering back towards the cars we found *Dryopteris carthusiana* (37/1315.7498) and *D. dilatata*, *Athyrium filix-femina*, *Dryopteris filix-mas* and a possible infertile *D. cambrensis* (37/1314.7496).

photo: D.G. Hill

Lunch in Gleann Beag below Creag nan Eun

Ian Schoolar (*standing*), Mike Canaway, Les Tucker, Heather McHaffie, Chris Nicholson, Bridget Laue, Paul Sharp, Mary Gibby, Brian & Sue Dockerill, John Edgington, Martin Godfrey, Sue Rumsey, Peter Mullard, Liz Cwilewicz

We moved up the valley to meet at the car park at Glenshee Ski Centre (Aberdeenshire; 37/138781). The bank immediately behind the main lodge, presumably made of bulldozed moraine from the site's construction, was a visually unpromising area but was scrambled up by pteridologists. *Lycopodium clavatum* formed extensive patches, with *Diphasiastrum alpinum* and *Huperzia selago* along with *Selaginella selaginoides*. A few tall *Botrychium lunaria*[2], quite the opposite of the minute examples found on the Yorkshire moonwort surveys, were found on the lower slopes, along with an occasional *Pinguicula* in flower.

At the top of the slope the eroded peat hags held a few cloudberries (*Rubus chamaemorus*), with impossibly large fruit balancing atop a tiny plant. Here and there arctic starflower (*Trientalis europaea*) and sibbaldia (*Sibbaldia procumbens*) were added to my list of things

[2] This has subsequently been demonstrated to be *B. nordicum*, one of several cryptic species in the *B. lunaria* complex – see note in the next *Pteridologist*. (F.J. Rumsey)

I wouldn't find at home. *Spinulum* (*Lycopodium*) *annotinum* was eventually located, my personal tick of the day. This was last seen in North Wales by William Wilson in 1836, and I had only seen herbarium specimens, so it was a real red letter day for me when Mike Canaway called me over to see this bright green lycopod running through the large heather mounds (37/1377.7815). Despite its almost industrial site feel, baked dry in the summer sun, this small area of clubmosses and moonworts was very much to me a small slice of heaven. A small patch of *Equisetum arvense* was found in a wet area next to the car park before a much needed coffee and celebratory ice-cream at the ski lodge.

The next stop was the first part of our required daily *Dryopteris* fix. A roadside clump had been spotted by Fred on our way up (Perthshire; 37/1143.7138), and heading back down we stopped to examine *Dryopteris oreades* and *D. cambrensis*; having both plants next to each other proved very useful in seeing how the latter's characteristics were derived.

Our final stop of the day was Drumore Loch in Angus (37/169609). In a ditch adjacent to the parking area we found *Equisetum arvense* and *E. palustre* intermixed, alongside *Pteridium aquilinum*. An old metamorphic dry-stone wall had *Asplenium trichomanes* and *Polypodium vulgare*, but more apparent was the mixture of large *Dryopteris* amongst the block scree. Time was very much against us at this point, but we managed to pick out *D. filix-mas*, *D. cambrensis* and a good candidate for *D. borreri*, together with a specimen that I put down as a questionable *D. affinis s.s.* Time ran out, but this site was definitely worth a revisit.

We returned to Kindrogan just in time for food. A brief lab session followed, looking at the *D. oreades* and a species of *Chara* collected during the day, and a delicately branched *Equisetum sylvaticum* from the driveway, before retiring to the bar for a much needed beer.

Tuesday 18th – Schiehallion & Loch Tummel, Perthshire **Brian Dockerill**

The second day of the meeting again offered warm and sunny weather as fifteen BPS members and the BSBI recorder for East Perthshire, Martin Robinson, set off to visit sites near Loch Tummel. The first of these, a small pull-in by the roadside near the Tummel hydroelectric power station (27/9115.5966), was to see *Equisetum pratense*. This was confirmed but, unfortunately, at first my group mistakenly believed it was *E. arvense* as it had a tough central core, resulting in some confusion and delay!

Our second stop was a beautiful ferny area above and around the elegant pedestrian Coronation Bridge over the River Tummel (27/9034.6012). The path down to this yielded *Athyrium filix-femina*, *Dryopteris cambrensis*, *D. dilatata*, *D. filix-mas*, *Oreopteris limbosperma*, *Pteridium aquilinum*, and a *Polypodium* confirmed in the laboratory session as *P. vulgare*. Across the bridge we saw *Struthiopteris* (*Blechnum*) *spicant*. Returning to the cars we found they were parked by a large, previously unnoticed colony of *Phegopteris connectilis*!

Reaching Loch Kinardochy (27/774549) after a picturesque drive through woodland, we found the first of the hoped-for *Dryopteris carthusiana*, swiftly followed within an area of heather by *Athyrium filix-femina*, *Dryopteris borreri*, *D. cambrensis*, *D. dilatata*, *D. filix-mas* and *Oreopteris limbosperma*. Further along, in a very marshy area, were many more strongly growing *D. carthusiana*. One plant was considered a possible *D.* × *deweveri*, however, later inspection of the spores showed that not to be the case. *Equisetum palustre* was also found but, for me, the highlight of the site was a vast area of *E. fluviatile* stretching far out into the water.

A further short roadside stop allowed us to see, as well as a small amount of *E. palustre*, two more horsetails – *E. hyemale* and *E. sylvaticum*, along with *Oreopteris limbosperma*, *Pteridium aquilinum*, *Selaginella selaginoides* and *Struthiopteris spicant*.

We drove on to a small disused limestone quarry (27/7149.5739) for lunch in the sunshine. After noting that the quarry area contained both *Asplenium trichomanes* and *A. viride* as well as *Cystopteris fragilis*, we climbed the short distance to a limestone pavement. Here we were shown *Gymnocarpium robertianum*, an extremely rare plant in the region and suspected by some of being introduced to the site. The pavement had many plants of the

two aspleniums as well as *Cystopteris*. In addition to *Athyrium filix-femina*, *Oreopteris limbosperma*, *Pteridium aquilinum* and *Struthiopteris spicant*, we added *Equisetum arvense* and *Selaginella selaginoides* to our list. After careful consideration of the *Dryopteris* on the site we concluded that *D. borreri*, *D. cambrensis* and *D. filix-mas* were present.

We retraced our route and drove to the north side of Loch Tummel, stopping to see the form of *Pteridium aquilinum* sometimes recognised either as var. *osmundaceum* or *P. pinetorum* subsp. *osmundaceum* (27/7781.5804). This swiftly led to the realisation that most of us had not zclearly that the *osmundaceum* form looked much coarser, with fewer but larger pinnules.

After a welcome stop for ice-cream we reached our final site for the day (27/778591), a small island in Loch Tummel linked by a causeway on both sides of which we found *Pilularia globulifera*, unmistakeable although mainly submerged. We also retrieved quills confirmed to be of *Isoetes lacustris*. We returned to the cars and thence back to Kindrogan after a very successful and varied day in the field.

Wednesday 19th – we divided into two groups, the most hardy souls going to:

Caenlochan Glen, Angus **Paul Ripley**

Nine of us set off along upper Glen Isla under the expert leadership of John Edgington. John's family rented a cottage nearby for many years. We parked near the gates to the Tulchan estate (37/188722) and followed a rough track. The Monega trail, which climbs Monega Hill and Glas Maol on its way to Braemar, soon headed for the ridge, and we too left the track, after a fruitless search for moonwort, which John had found here some years earlier. We also noted *Oreopteris limbosperma*, *Struthiopteris spicant*, *Lycopodium clavatum* and *Equisetum sylvaticum* at this lower altitude.

Our route now climbed significantly over rough terrain below the scarp of Monega. A tiny figure appeared on the ridge and descended to join us, sadly not bearing the empanadillas of the previous day. This was Les, John's friend from Dundee, a knowledgeable botanist who was to join us for the rest of the day.

photo: P.M. Canaway

Caenlochan Glen

David Hill, Mary Gibby, John Edgington, Brian Dockerill, Paul Sharp

We now headed north-west, up Caenlochan Glen below Glas Maol. We noted *Cryptogramma crispa*, *Polypodium vulgare*, *Equisetum pratense*, *Phegopteris connectilis*, *Dryopteris dilatata*, *Gymnocarpium dryopteris*, *Athyrium filix-femina*, *Cystopteris fragilis* and a single *Polystichum aculeatum*. The rock was mainly mica schist, with frequent calcareous intrusions. *Huperzia selago*, *Diphasiastrum alpinum* and *Selaginella selaginoides* were also seen here. Small *Dryopteris*, heavily grazed like many of the ferns, may have been *D. oreades*, but we were to see more convincing specimens further on. *Asplenium viride* was becoming more common, and one plant of *A. trichomanes* was noted. At 704 metres altitude a good candidate for *Dryopteris expansa* was seen, and we were to see better examples in rock crevices later. This fern is notably paler green, more delicate, has scales with a less dark central area and with pinnae angled more towards the frond apex, than *D. dilatata*. Basal basiscopic pinnules were mostly noticeably longer (more than half the pinna length).

We eventually reached one of our targets, *Cystopteris montana*, small but perfectly formed (37/1842.7608). This site, found 40 years ago by P. and A. Geddes, and recently re-discovered by Theo Loizou, is the only Angus station for this montane fern. *Polystichum lonchitis* was now becoming quite common, and Mary Gibby finally and gleefully spotted moonwort, *Botrychium lunaria*. We had lunch on a botanically rich bluff with several species of rare montane willows and sedges and *Dryas octopetala* in flower. We decided to push on further across the rough ground and steep scree below Glas Maol, and were rewarded with a single very fine plant of *Athyrium distentifolium*, and finally five plants of *Woodsia alpina*, again small but sporing, and another of the Geddes' discoveries (37/1741.7661).

photo: M. Gibby

Paul Ripley with *Athyrium distentifolium* below Glas Maol

Weary but well-satisfied we made our way back to the cars, noting on the way *Equisetum palustre*, not previously recorded. Twenty-six taxa and not a single *Pteridium aquilinum*! We were very grateful for John's detailed knowledge of the area and its botany, and for guiding us expertly over quite difficult terrain.

Dunkeld, Perthshire **Heather McHaffie**

The lowland group had a leisurely stroll around Dunkeld. We first went to The Hermitage and saw very large *Polystichum aculeatum* growing on the river bank below the path. The rest of the ferns were the common woodland species that would be expected. We were sorry not to be able to cross the bridge to a more interesting area due to a large part of the opposite bank having been washed away. This would have included being able to scramble above a patch of *Hymenophyllum wilsonii*. We spent some time in the folly called Ossian's Hall, admiring the waterfall and trying to spot the filmy fern with binoculars but could not honestly record it. We moved into Dunkeld and walked along the Tay to see the Birnam Oak. The best ferns were perhaps those carved on a memorial to a Duke of Atholl in the middle of Dunkeld.

Thursday 20th – Corrie Fee (37/2475), Angus **Fred Rumsey**

Overnight the weather had worsened and I was glad that the more challenging montane day in Caenlochan Glen was behind us as the convoy of vehicles made the somewhat tortuous journey across to another place of pilgrimage for lovers of arctic-alpine plants, Corrie Fee. We had last been here with Heather on the national meeting in 2011 (see *Bulletin* 7(4): 307-8) and I was really looking forward to being back.

We gathered at the Glen Doll Visitor Centre (37/283761) where we rationalised the number of vehicles since, as previously, the Angus Ranger Service had given us permission to drive into the site on the forestry road, saving a slog up through less productive forestry. Lock-related difficulties led to a delay in our getting access. However, we finally attained the glorious vantage point at the lip of the corrie, just above the woodland that had provided abundant *Oreopteris limbosperma*, *Struthiopteris spicant*, *Dryopteris dilatata* and some very attractive *Equisetum sylvaticum*. The weather by now had deteriorated to 'fairly horrid' (I'm from Essex so don't do rain over well!) but the group doggedly set off on the main track towards the waterfall at the head of the Corrie. The intention was to revisit the

rather damp calcareous cliff ledges that are home to a population of *Woodsia alpina* that Heather has been monitoring for many years. *En route* we started to pick up more of the montane specialities less familiar to some, such as *Polystichum lonchitis* and *Cryptogramma crispa*, reflecting the mix of calcareous and acidic geologies. Many of the British clubmosses were also evident, including *Spinulum annotinum*, along with a range of horsetails. Indeed, the area is well known to support a large and diffuse population of *Equisetum* × *mildeanum*, the hybrid between *E. pratense* and *E. sylvaticum*, which most of the group missed by crossing the burn before they reached it growing by the main path through the corrie.

Having identified our target cliffs, the by now somewhat fragmented group traversed the corrie floor by various routes. Crossing the Fee burn proved a little challenging to all and it was obvious that some were finding the going rather difficult. One could not doubt the determination shown by even the least nimble to try to see the *Woodsia*, a tiny jewel in a wet but unfortunately somewhat precarious position, but eventually common sense prevailed and with nobility Paul Ripley and Mary took up the role of shepherds, taking the less agile back down to the vehicles as the weather worsened. Prior to leaving, Mary's rock-climbing prowess revealed further larger plants of the *Woodsia* higher on the same rock-face (see photo) and we concluded that it was maintaining its numbers here well.

photo: F.J. Rumsey

***Woodsia alpina* doing well in cliff fissures, Corrie Fee**

The remaining members of the group set off obliquely along and up the slope with the intention of paying their respects to *Woodsia ilvensis*. We re-gathered part way to go into an Emperor penguin-type huddle while sandwiches were consumed in a rather exposed and unforgiving spot. Fortified, we made it to the rather isolated boulder upon which exists the very impressive patch of *Woodsia ilvensis*, growing, as it so often does, in a horizontal cleft. This had clearly had a good growing season and was, by its standards, fairly luxuriant.

photo: F.J. Rumsey

***Woodsia ilvensis* in Corrie Fee**

This seemed a fitting point at which to call it a day for the majority of the group, although the proximity of flowering plant treasures, particularly *Oxytropis campestris* in one of only three British sites, meant that a splinter group of John, David and Fred continued on upwards, passing some particularly nice examples of *Dryopteris expansa*, protected from grazing amongst scree boulders. Botanically satiated, we descended to meet up with the rest of the group and arranged ourselves into vehicles for the drive back to the visitor centre and the tricky business of re-securing the gate. An earlier start and less inclement weather might have meant we could have also paid our respects to *Hymenophyllum wilsonii*, recently re-discovered here near the waterfall at one of its highest and most north-easterly occurrences, and other treasures too. But I think that everyone enjoyed this opportunity to see this spectacular site and two of our rarest ferns, irrespective of the weather (and it is always good to have an excuse to come back here!) It was a fitting end to a splendid meeting.

TAVISTOCK, WEST DEVON – 8-10 September
(Leaders: Ian Bennallick & Andy Byfield)

Friday 8th – The Hidden Gardens near Tywardreath, Par, Cornwall Martin Rickard

The meeting was to start officially in Tavistock but five of us had the good fortune to fit in a mid-afternoon visit to The Hidden Gardens near Tywardreath, Par, Cornwall. We were greeted by Tricia Howard who led us on a tour of her beautiful garden, taking advantage of an interval between showers. Ferns here are very well grown, sometimes unrecognisably luxuriant. *Polystichum polyblepharum*, *Dryopteris sieboldii* and *Polystichum setiferum* Plumoso-multilobum Group, for example, were huge, as was *Woodwardia radicans* – evidence that the garden enjoys a soft climate only a mile or two from the sea. There were other species that are delicate further north, such as *Lastreopsis* species, but in particular I was amazed to see a wonderful plant of *Adiantum hispidulum*. Overall the fern collection here is very good, with many cultivars and many exotic species. The garden is huge, specialising in ferns (of course!) and herbaceous plants that were fabulously colourful at the time of our visit. Apart from looking after the garden Tricia runs a small fern nursery, growing ferns from spore – species and cultivars. I was particularly pleased to see spore-grown progeny of *Polypodium cambricum* 'Grandiceps Foster' being offered. I could not resist! Then it was off to a late lunch of sandwiches and cake kindly provided by Tricia, before heading east for Tavistock.

Friday 8th, evening – Tavistock Railway Line Ian Bennallick

At 5 p.m. twenty members met in Tavistock at Kilworthy Park/West Devon District Council offices at 20/481747 and followed the old railway line westwards over a grand viaduct and into a deep cutting. Common ferns were luxuriant and, as Andy Byfield described it, it is more temperate rainforest gorge than urban railway cutting. The highlight here was the population of diaphanous bladder-fern, *Cystopteris diaphana*, which formed curtains of fronds along a short stretch of dripping cliff from 20/4754.7434 to 20/4766.7441. *Polystichum setiferum* was found, then at least one plant of *P. aculeatum* and later one plant of *P.* × *bicknellii* on the south-east-facing side of the railway cutting at 20/4750.7431 (confirmed later microscopically by Fred Rumsey). Other species noted along the railway line included *Dryopteris cambrensis* and *Equisetum arvense*. We also saw one plant of *Polystichum setiferum* 'Acutilobum' on the cutting at 20/4788.7455, confirmed by Martin Rickard. Martin said it is possibly a garden escape but could be a spontaneous appearance?

The group later reconvened at The Cornish Arms pub in the centre of Tavistock for an evening meal and fern talk.

Saturday 9th – Shaugh Prior; china clay workings north-east of Plymouth; Jennycliff Bay Paul Ripley

Twenty-five members and guests met at the National Trust Dewerstone Rocks car park (20/533636) near Shaugh Prior, where the road crosses the 'cleave' formed by the River Plym as it rushes through a wooded gorge on its way down the steep flanks of Dartmoor. It is a magical place, shaded and damp, with moss-covered granite boulders forming classic temperate 'rainforest'.

By the car park, *Asplenium trichomanes* subsp. *quadrivalens* (on the walls of a ruined building), *A. scolopendrium* and a single large *Polystichum setiferum* were noted. Apart from a very few plants of *A. scolopendrium*, we were not to see these species elsewhere in the gorge. We walked a short distance up the gorge along the south side of the river, then back again and over the bridge to explore on the north side a little. A single plant of *Dryopteris aemula* was spotted not far from the car park and, unexpectedly,

D. carthusiana a little further on. *Struthiopteris* (*Blechnum*) *spicant* was common, as were *Dryopteris dilatata*, *Athyrium filix-femina*, *Pteridium aquilinum* and *Polypodium interjectum* (mainly epiphytic on old trees, and sometimes almost seeming to replace the tree's foliage). Separate colonies of *Hymenophyllum tunbrigense* and *H. wilsonii* were found, the former always on granite boulders, and further from the river. *Dryopteris affinis* was easily the most abundant '*affinis*', but Matt Stribley reported the presence of *D. cambrensis* (20/536636). Some of the *Dryopteris affinis* resembled *D. borreri*, with truncated pinnules, but closer inspection confirmed *D. affinis*. Gill Smith found a single quite large *Osmunda regalis* higher up the slope, and the gametophyte of *Vandenboschia speciosa* was also found. *Oreopteris limbosperma* completed the tally.

We stopped about 200 metres further up the road in Shaugh Prior village (20/538632) to see *Asplenium obovatum* subsp. *billotii* growing happily on a typical Devon earth bank (over stones) wall. The banks are typically regularly strimmed, which may aid survival. *A. adiantum-nigrum* also grew on this wall. Fred Rumsey examined spores from some apparently atypical triangular *A. obovatum* subsp. *billotii*, but the spores were good and *A.* × *sarniense* could not be confirmed. *Dryopteris filix-mas* (notably absent from Dewerstone Rocks) grew by the road at this site, together with *Asplenium scolopendrium*, *Polypodium interjectum* and *Pteridium aquilinum*.

Our next stop was by the road above an area dominated by open-cast china clay and tungsten mining (20/580616). Our leader wisely advised an early lunch as an extremely heavy shower eventually passed, and we set off, initially across pasture land, to find shallow pools, warmed by the sun, where *Isoetes echinospora* was washed up on the leeward 'shore', enabling distinction from the abundant and similar, but more firmly rooted, *Littorella uniflora* (shoreweed) (20/574594). A little further on, a shallow patch of waste land had quite abundant colonies of *Lycopodiella inundata* (20/577593).

photo: B.D. Smith

***Lycopodiella inundata* site north-east of Plymouth**

Helena Crouch, Andy Byfield, Ian Bennallick, Ashley Basil (*half hidden*) John Day, Roger & Sue Norman, Paul Ripley, Jo Basil, Matt Stribley, Brian Dockerill

Amazingly escaping the worst of the rain showers, we drove through the suburbs of Plymouth to our final destination at Jennycliff Bay (20/492523). Taking advantage of a

photo: B.D. Smith

Jennycliff Bay near Plymouth

Mary Gibby, Grace Acock, Ashley Basil (*on cliff*), Martin Rickard, Sue & Roger Norman, Andrew Leonard, Brian Dockerill, Gill Smith, Sue Dockerill, Jo Basil (*half hidden*), Fred Rumsey, Ian Bennallick, Andy Byfield, Matt Stribley, Helena Crouch, Tim Pyner

particularly low tide, we found *Adiantum capillus-veneris* growing in profusion on the Devonian shale cliffs at 20/490523, benefiting from the lime-rich seepages above. We also saw *Asplenium marinum*, looking healthy, but not abundant. I regret to say that many of us were unable to resist the draw of a cream tea at the Jennycliff café. It did, however, provide a satisfying end to a varied, well-planned and well-organised day.

Sunday 10th – Central Dartmoor **Sue Dockerill**

The day dawned misty and overcast as we met at a roadside car park near Merrivale (20/560748). However, the clouds lifted and broke somewhat as we set off on the easy uphill path towards Great Mis Tor. A yomp of about half an hour brought us to the outlying boulders of this scattered rocky outcrop and the party dispersed to see what it offered. First seen were *Dryopteris dilatata*, *D. filix-mas* and *Struthiopteris spicant*, and then *D. aemula* was spotted growing high up in a deep crack open to the sky. Polypodiums grew along many of the rock fissures – any I could look at closely were *P. vulgare*. On the west-facing rocks at the top of the tor numerous colonies of *Huperzia selago* (20/5626.7692) were found, each looking more photogenic than the last and much photographed. In this area we also found our first *Hymenophyllum wilsonii* growing between boulders and Matt Stribley found the gametophyte of *Vandenboschia speciosa* (20/5630.7700) low down in a deep rocky cleft – at 520 metres, its highest known location in the British Isles [according to Fred Rumsey] and a new record for the area.

Our leader suggested we explore a lower outcrop to the north, and here a much larger colony of *H. wilsonii* was found. However, the weather was beginning to close in again and some people started back. Several stouter souls moved westwards from this outcrop to explore the outlying boulder-fields. There they were rewarded with many colonies of both

H. wilsonii and *H. tunbrigense*, often growing together deep underneath the rocks. Sadly, no hybrids were found. Also in this area were two colonies of *Phegopteris connectilis* (one at 20/5597.7696) growing along rocky cracks.

photo: B.D. Smith

Peter Blake & Sue Dockerill looking for filmy ferns near Great Mis Tor, Dartmoor

By now the visibility was poor and the wind and rain were increasing, so, making sure that no-one was left behind, the remaining party members descended. At this point it had been intended to visit the only site on Dartmoor for *Cryptogramma crispa*, but, owing to the time and the amount of traffic on the narrow road, we made our way to The Warren House Inn to dry out and have some lunch.

We emerged to find the skies cleared and a rather reduced group of 11 set off to explore the old spoil heaps and scourings south of the inn, where *Lycopodium clavatum* had been found previously. This area obviously suited bracken (*Pteridium aquilinum*) as there was tons of it, but the conditions on the spoil heaps were not as favourable and this allowed heather, *Struthiopteris spicant*, *Dryopteris dilatata* and *Athyrium filix-femina* to get a foothold. A fantastic find here, and a new record for the area, was *Phegopteris connectilis* (20/6745.8050), this time on a grassy bank with *Dryopteris borreri* and *Athyrium filix-femina*. Following a small stream westwards, we came across several *Dryopteris affinis* subsp. *paleaceolobata* [confirmed by Roger Golding, pers. comm. Tim Pyner]. Finally, at the bottom of the slope near a small plantation we saw *Oreopteris limbosperma* by the stream. This was where Andy had seen the *Lycopodium* in the past, but sadly we were unable to refind it. After climbing up to the road we refreshed ourselves with tea in the inn.

Despite the lashing rain, nine of us decided to visit the *Cryptogramma* site missed in the morning. With no other cars or visitors to hamper us (I can't think why) we parked immediately opposite it. The plants – probably around half a dozen in all – were on the inside wall of a small stony ruin (20/613711). None were sporing but they seemed healthy. Also on this ruin were *Polypodium interjectum*, *Asplenium trichomanes* subsp. *quadrivalens*, *Struthiopteris spicant*, *Dryopteris dilatata* and *D. filix-mas*. Oh, and *Pteridium aquilinum* as well. A thoroughly satisfying end to a great day and a fantastic weekend.

LECTURE MEETINGS AND DAY VISITS

SPRING MEETING: 'YORKSHIRE FERNS', HULL, EAST YORKSHIRE

University of Hull – 22 April **David Hill**

We arrived early, or so we thought, just in time to see a couple of even earlier delegates walking back to their cars clutching armfuls of ferns; obviously the plant hunting starts early in these parts. Fortunately with a long journey the following day we hadn't intended buying any plants, however, I was keen to get to the merchandise and books before they all vanished! Tea and coffee, plant sales, books, displays and throngs of people greeted us as we arrived in the lovely Wilberforce Building, part of the University of Hull. After catching up with some familiar faces and my (first) round of book purchases (*Ferns and fern allies of Canada* by Cody & Britton), it was time to find a seat.

Professor Roland Ennos from the University gave a lovely welcome and a fascinating insight into Kingston-upon-Hull, its setting on the Humber estuary and the structure of the East Riding of Yorkshire. The whistle-stop guide to the Riding included the Yorkshire Wolds, chalk-streams, salt-marshes, Spurn peninsula and sea cliffs.

Next on the programme was 'Fossil ferns of the Yorkshire coast' by James Merryweather, but unfortunately he was unable to attend. However, at very short notice Dean Lomax bravely stepped into the breach. Dean is an authority on the fossils of the Whitby coast, and gave a delightful and highly enthusiastic insight into the coast between Staithes and Ravenscar. We swam through Jurassic seas with ammonites, belemnites, crinoids and crustaceans. We ventured onto the land with plant material, including ferns, cycads, bennettitaleans and horsetails, before returning to the animal realms with the dinosaurs of Yorkshire and up to the comparatively modern day mammoth teeth washed up along the Yorkshire coast. On the fern front Dean showed some lovely examples of *Cladophlebis denticulata*, and *Coniopteris hymenophylloides*. Not all was plant related, but this was forgiven due to his obvious infectious enthusiasm for all things fossilised.

'Urban ferns in Hull' by Richard Middleton was up next. Richard is a Hull Naturalists member, a geographer by trade but also a keen and knowledgeable botanist, and is BSBI Vice-County recorder for East Yorkshire. As one has come to expect in the context of urban ferns, a mix of natives and adventives come and go on the changing urban stage, but what was particularly interesting about Richard's talk was the picture he painted though time, looking at historic (Fraser Robinson's *Flora of the East Riding of Yorkshire* from 1902 and Eva Crackles' 1990 Flora of the same name) and modern records. Species lost included both opportunists such as *Cyrtomium falcatum* and *C. fortunei*, and the native *Botrychium lunaria*; but some of the more generalists were increasing. Richard also showed us an amazingly simple but elegant little study of urban wall aspleniums over successive years and their increase in response to falling sulphur dioxide pollution.

A brief comfort break allowed people a chance to look at some of the books and fossils brought in, the latter appealing to young and old alike, before a prompt 12:00 start by Barry Wright. Regular readers of the *Bulletin* will be familiar with some of the more dubious activities of the Yorkshire Fern Group, namely wandering along road verges with a metal detector, lying around on the rain-soaked moorlands and trying to net small teddy bears (Scale Bear) using a home-made quadrat. The purpose, method, problems and results of these annual surveys were revealed in Barry's talk on 'Surveying and monitoring moonwort (and adder's-tongue) in Yorkshire'. This fascinating study, which I do admit is great fun (and the lunch-time beer is great too), showed how a regularly repeated survey of a small known population can help answer questions (and raise many more) on some of our most overlooked yet charismatic species.

At the other end of the spectrum, giant osmundas were the subject of Professor Alastair Fitter's insightful talk on 'Fern comings and goings at Askham Bog'. This post-glacial lake site now

consists of neutral fen at its edges, through mildly acidic fen to a highly acid centre, all perched on a domed fen peat centre, along with alder and willow carr, acid woodland and water. With peat cutting dating back to Roman times, the changes in flora were illustrated through historic records and current findings. Losses from the site included *Dryopteris affinis s.s.*, *D. cristata* (last seen in 1893), *Phegopteris connectilis*, *Lycopodiella inundata* and *Ophioglossum vulgatum*. Other hybrids and species had been recorded occasionally, but rather alarmingly the extant *Osmunda regalis* consisted of large, ancient individuals producing plenty of spores but with no evidence of population recruitment. The good news was that *Thelypteris palustris* (along with *Carex elongata*) seemed to be recovering well.

Lunch presented another opportunity to purchase books (this time I found a nice copy of *Flora Nordica* by Jonsell) and have a quick look at the displays, including a great one by the Yorkshire Fern Group with a tray of pillwort on display. Following much deliberation I cast my vote in the annual photographic competition before a walk across campus to get some lunch and a super-fast tour of the art collection in the Brynmor Jones Library.

After lunch Fred Rumsey chaired the 114th AGM (reported separately).

A quick post-AGM break was followed by the final two talks of the day. John Grimshaw, Director of Yorkshire Arboretum, entertained us with the trials, tribulations and challenges of moving ferns from Gloucestershire to the comparative 'arctic' of a cold and windy site in North Yorkshire. His beautifully illustrated talk tied in books with the corresponding plants, and showed 'strawmageddon', the lengths he had to go to in order to protect his plants. On a personal level, although not a cultivar collector (yet), his pictures of *Athyrium filix-femina* 'Plumosum Drueryi' and *Polystichum setiferum* 'Pulcherrimum Bevis' did have me scribbling down a design for a new fern bed at home!

The last slot was reserved for Julian Reed, concluding a fascinating day with a fascinating talk on 'Yorkshire fern growers and their cultivars'. Julian led us on a historical journey of ferns and their collectors. Names included both obscure and familiar characters, from Mr Clapham in 1859 with his beautiful specimen of *Asplenium trichomanes* 'Incisum', through familiar names such as Ken Trewren, Jean Marston, Irene Manton and through to modern counterparts; growers, collectors and fernophiles that have become familiar names within the collective memory of the Society.

photo: D.G. Hill

Fred Rumsey presenting Yvonne Golding with her Outstanding Contribution Award

Finishing the exhilarating day, Fred Rumsey gave a recap, thanked the outgoing committee members for their work, and Yvonne Golding for the organisation of such a varied and packed conference. All agreed it was a great success. Yvonne was also presented with an Outstanding Contribution Award Certificate and large engraved glass in recognition of her achievments in ten years as General Secretary. I for one thoroughly enjoyed the day, coming away poorer, wiser, loaded with books, and conscious that as new Secretary I have a very tough act to follow.

Urban Ferns in Hull, & Thwaite Botanical Gardens, East Yorkshire – 23 April Sue Dockerill

On a bright, sunny Hull morning, over 40 members met with our guide, Richard Middleton, in the centre of town by the River Humber. Our route was to take us around the old docks, through the site of the medieval town and then over to the old town. Much of this area is being re-invented for tourism and leisure following the demise of this part of Hull as a port. On the south-facing wall of the nearest dock, we were really pleased to see many *Asplenium marinum* plants growing in the mortar joints of the sandstone dock wall, just above high tide level. The structure dated from 1809, but the *Asplenium* had first been reported in 2004, and since then had spread. The maintenance engineers were aware of its presence, but plants in such highly managed locations would always be at risk of over-zealous cleaning. On the north-facing wall of the inner dock we saw our first plants of *A. scolopendrium*, *A. trichomanes* subsp. *quadrivalens* and, on the east-facing wall, *A. adiantum-nigrum*. We were to see these three aspleniums at many more locations in the city. However, the most exciting find here was a small *A. marinum* – a new siting for this exact dock! It was great to see it in two locations in this area, as this must increase its chances of survival and recolonisation if removed. Wandering through the town, we saw the other three spleenworts many times more on neglected buildings and old stone surfaces, in one location joined by *Polypodium vulgare* and in another by *Dryopteris filix-mas* and *Asplenium ruta-muraria*. Our thanks go to Richard for a thoroughly enjoyable urban ramble, which ended in the quiet garden of the Wilberforce Museum.

photo: B.D. Smith

BPS members looking at wall ferns in old docks in Hull

After lunch, we made our way to Thwaite Botanical Gardens where we began with Roland Ennos showing us the outside grounds, which contain many noteworthy trees in parkland around a large lake. There was a shady fern border with a lot of of interesting hardy ferns (far too many to list) just throwing up new fronds. I particularly liked the contrasting new growth of *Polystichum munitum* and *Onoclea sensibilis*. We then went to the glasshouses where there were even more ferns to see, including some huge *Platycerium*, which were stunning. I was pleased to see *Davallia solida* – a plant that I have tried to grow from spore unsuccessfully – and the huge range of *Pyrrosia*, a genus I am very fond of. There were many plants new to me, but one that sticks in the mind was *Dennstaedtia glauca* with very finely divided, bright green upright fronds. After an hour or so sent spent happily pottering, we had our final treat for the day – cream tea and cakes. A great way to end a fantastic weekend and our thanks go to both Yvonne and Roland for making it so much fun.

CULTIVAR MEETING, SOUTH-EASTERN LAKE DISTRICT – 15-16 July

(Leader: Julian Reed) **Mark Border**

Our weekend in the Lake District started damply and progressed to heavy rain on the Saturday, while the Sunday was the opposite – warm, dry and sunny.

Saturday began with a substantial group of us meeting south of Kendal at the Strickland Arms Hotel. We were treated to refreshments while listening to two very interesting talks. The first, illustrated with slides, was by Andrew Harrison on the history of the ferns at Sizergh Castle and of the site itself. Julian Reed then spoke on *Asplenium scolopendrium* frond-base propagation, something I must try again. Afterwards the meeting was opened up to general questions, mainly around propagation. After some persuasion, David Redmore gave us an insight into the methods he used at the Kaye's nursery where, after much experimentation, they found that the most efficient results were achieved by mixing the cleaned spores with distilled water and spraying them onto the substrate. I suspect a number of members will be trying this technique on their next sowings. A plant sale was also held, with some very large and choice plants on offer.

photo: M. Border

***Athyrium filix-femina* 'Plumosum Axminster' at Sizergh Castle**

After lunch, mainly taken in the Hotel bar (very good), guided by Andrew we set off to the rockery at Sizergh under a forest of umbrellas. The rockery is in a slight dip and contains a good collection of ferns. My eye was particularly taken by a fine *Athyrium filix-femina* 'Plumosum Axminster' and some very good plants of *Polystichum setiferum* 'Divisilobum'. From here we headed to further plantings of mainly *Dryopteris* species and cultivars along the foot of low walls.

On Sunday we met north of Carnforth at the far end of Warton village (Northwood Cottage) to see a bed of ferns believed to be originally from the Bolton Collection. The owners were away but we were shown around by Alec Greening and Julian, the latter having been spotted waving fronds over the garden wall, one of the advantages of being extra tall! Although the bed was in quite an exposed position, all the ferns were looking great, including some exceptionally fine 'Crispum' scollies. The owners of the property are adding other ferns around the garden, and we also spotted several young plants that looked self-sown.

We went back into the village to see the garden (Stoneycroft) of one of the Victorian fern 'Greats', Robert Bolton. It might be small but the ferns are quite fantastic, and can easily be seen from the public footpath, although we were allowed in the garden. It is very difficult to pick out specific ferns but I will mention a wonderful *Polystichum setiferum* 'Bevis' that one can gaze into from the path. Even the self-sown fern 'weeds' were better than many of my plants.

The lure of tea and cake at Alec Greening's home (Pear Tree Cottage) in Burton-in-Kendal finally dragged us away from the Bolton garden. The Greening's garden was the largest of the three with, again, a superb collection of ferns including many choice varieties. But this garden is about much more than just ferns. The trees, shrubs and herbaceous plants added to the pleasure (for me, arisaemas and heucheras in particular). The ferns are incorporated into a beautifully designed garden that is an adventure to wander around. There are many little paths between beds so, even as part of a group, one can quickly find oneself quite alone. Again it is difficult to pick out specific ferns to mention but just about everyone was drawn to the glowing gold and copper colours of a *Dryopteris erythrosora*. I know nearly everyone grows it, but not like this. For further details of some of the delights to be seen here, I recommend a re-read of the report in the 2016 *Bulletin* (page 210).

This was a wonderful weekend seeing amazing ferns (and other plants), learning new cultivation tips and seeing superb gardens. Thanks to all concerned in making this such a special meet.

AUTUMN MEETING: 'FERNS AND ISLANDS', CAMBRIDGE UNIVERSITY BOTANIC GARDEN – 18 November Brian & Sue Dockerill

Our first talk was from Mary Gibby who set the scene for the remainder of the day. Islands are well known for having endemic species of all life forms, and Mary explained that this was influenced by a number of aspects, in particular the distance to the nearest land mass, as well as the age of the island, and geological and climatic factors. In addition, ferns were likely to be well represented as, compared with the seeds of flowering plants, ferns spores travelled widely by wind dispersal. She went on to illustrate some of these features using the extremely remote island of Tristan da Cunha. Despite an overall reduced flora, this had a high (40%) proportion of ferns, of which 46% were endemic. While these could be related in part to the land mass to the east, there was a notable relationship to ferns from the South American cloud forest downwind of the island.

Second up was Pat Acock who explained that, after seeing pictures shown by a visiting lecturer from Kew, he'd decided that he had to visit Lord Howe Island. Having similarly enthused a group of fellow BPS members, they travelled from Sydney to visit the island, which is situated between there and the North Island of New Zealand. He went on to describe their adventures, travelling by bicycle and foot. Despite one member suffering from severe vertigo, they climbed the island's precipitous mountains to locate and photograph a huge range of ferns. Of especial interest was to successfully find *Asplenium goudeyi* in the company of its original discoverer, Chris Goudey.

The final talk of the morning, 'In search of *Asplenium hybridum*', had been prepared principally by Tim Pyner and was presented by Andrew Leonard. This is a rare fern endemic to the Kvarner Islands, situated in the Adriatic Sea off the coast of northern Croatia. It is a hybrid between two dissimilar species: *A. ceterach* subsp. *bivalens*, sometimes referred to as *A. javorkeanum*, and *A. sagittatum*, the latter looking rather like a small leathery *A. scolopendrium*. These both have wide but very dissimilar distributions that overlap around the northern Adriatic. The literature on the sites for the hybrid was very sketchy and referred to three caves on the Island of Rab. Once there, Andrew and Tim searched for these sites, eventually finding just one a few metres from the sea, though that was described to us as "more like a hole in the ground than a cave". However, the plants, looking most like *A. sagittatum*, but with scales on the under-surface as in the *A. ceterach* parent, were there to be found. After this considerable effort they returned to the town, only to find hundreds of the plants festooning the north- and north-east-facing town walls, this being the only fern present!

After lunch, our fourth talk was by our President, Fred Rumsey, on endemicity and evolution in Macaronesia. This is a group of oceanic island archipelagos in the Atlantic Ocean and Fred was able to use these to build on the themes brought out earlier by Mary. Their patterns of endemicity or near endemicity both within and between the archipelagos, and between them and the continental masses either side of the ocean, provide a living laboratory for botanists to study fern evolution, spread and adaptation. Fred gave us some fascinating insights into this and also, tantalisingly, into how much was still left to be understood.

Roger Golding then told us about the fern flora of a very different island, Taiwan. This time a continental island with a huge fern flora and, compared to Macaronesia, relatively little endemicity. Roger showed us an amazing variety of ferns, although he assured us it was only a fraction of what this warm and wet island has to offer. These ranged from the huge *Asplenium pseudolaserpitiifolium* to the tiny filmy fern *Crepidomanes minutum* and everything in between!

Our sixth talk was from Martin Rickard, who brought us back much nearer home, to the island of Ireland. Unlike our previous talks, this was not about endemicity (Ireland has no endemic ferns) or variety (its overall range is much like the rest of Britain), but instead addressed the few fascinating ways in which it was different from what you might call the British mainland. Why were some things not in Ireland? Why were some much rarer and others more prolific? Again, no complete answers but a great deal to make you ponder.

Our final talk of the day was by Sylvia Martinelli on the ferns of Stewart Island. This is another continental island, this time close to the South Island of New Zealand and with a very similar fern flora to its near neighbour and, as that implies, no endemics. Its main attraction is its unspoilt nature with almost no roads, little agriculture and with most of the island only accessible by foot. Sylvia showed us some great pictures of the fern flora of this region, a lovely way to finish a very interesting programme.

Thus ended a day both carefully structured around the common theme of Island Ferns, but at the same time comprising within that a series of excellent lectures on very varied topics. Considerable thanks must go to Tim Pyner and Peter Blake for putting the programme together, as well as to the speakers themselves.

REGIONAL MEETINGS

EAST ANGLIA

Winter Indoor Meeting, Southend, Essex – 28 January — Tim Pyner

Twenty-one members and guests gathered at Tim Pyner's house in Southend for our annual winter meeting. We were lucky with the weather, as it was mild and sunny after several weeks of rather cold but dry conditions. This allowed the garden to be viewed without wading through mud and water as had been the case for the last few winter meetings.

Following a relaxed lunch we managed to squeeze into the lounge where our current President, Fred Rumsey, talked about his busy ferning year during 2016. The 125th anniversary events were a highlight of the year and the successful Cumbria meeting in June provided many interesting photos. Fred's work often involves monitoring rare ferns in difficult terrain and we saw photos of both species of *Woodsia* and also a strange *Cystopteris* form being studied in Snowdonia. Elsewhere *Dryopteris cristata* is being re-introduced at a former site in Cheshire where it has not been seen for many years. This project appears to be a success and may pave the way for future re-introductions at other sites where it has been lost. One particularly fascinating item of ongoing research is demonstrating that Killarney fern (*Vandenboschia speciosa*) consists of two distinct forms that are molecularly and morphologically distinct. It will be of great interest to see how these are treated taxonomically in the future. Elsewhere *Marsilea quadrifolia* has been found well established in a pond in Warwickshire. How it arrived and from where remains a mystery but it will interesting to see if survives for any length of time. It is most unlikely to become invasive or become a problem like some other aquatic plants. However, that possibility is there and it should be monitored for signs of invasiveness.

Following a break for home-made cakes and other refreshments, Tim Pyner showed some of the many ferns seen on his trip to Japan in 2016. The fern diversity in Japan is remarkable and highlights the paucity of the pteridophyte flora of Britain and Europe. To see temperate ferns in all their glory Japan is most highly recommended. Finally we all gave thanks to Beverley for preparing a fantastic feast that sustained us throughout the day.

Wayland Wood, Watton, Urban Jungle Nursery & Crete Lodge Exotic Garden, Norwich, Norfolk (Leader: Tim Pyner) – Saturday 22 July — Margaret Nimmo-Smith

Our group of 16 assembled in the car park at Wayland Wood, Watton IP25 6HN (52/9226.9959). Wayland Wood is a Norfolk Wildlife Trust ancient woodland SSSI nature reserve with a rich ground flora. The woods consisted of oak and birch with some beech trees. Although we explored along all the main paths around the wood, parts of the wood had been coppiced, enabling a thick impenetrable understorey inclement for ferns. Bluebell seedheads in part of the wood confirmed that this was an ancient woodland site and here ferns were more plentiful, mainly along the edge of the paths and where the trees were mature with less understorey. The only three found were *Dryopteris filix-mas*, *D. dilatata* and *Pteridium aquilinum*, although a fourth species was reputed to be present.

Lunch had been booked at the Urban Jungle Nursery Café at Costessey, near Norwich, which was excellent and it was quite an experience eating surrounded by exotic plants. Here we found an amazing collection of plants for sale, including many half hardies such as cannas and gingers, and a good selection of ferns but nothing too unusual. I did buy a plant of *Cyathea cooperi* and of course succumbed to other interesting acquisitions.

photo: B.D. Smith

Crete Lodge Exotic Garden, Norwich

Gill Smith, Karen Munyard, Melissa Scott, Tim Pyner

We completed our day at the extraordinary exotic garden of Keith and Melissa Scott at nearby Crete Lodge. This garden, created over twenty years, has an amazing collection of plants including many otherwise half-hardy plants thriving out-of-doors in a very interesting landscaped garden position. Despite being on the shoulder of a hill, they have created sufficient shelter, also provided by the neighbouring wood, to grow many otherwise half-hardy and tender plants outdoors. We entered through a thicket of tree ferns, mainly *Dicksonia* and *Cyathea*, and terrestrial ferns including *Parablechnum cordatum* (*Blechnum chilense*), *Lophosoria*, *Polystichum setiferum* 'Bevis', *Asplenium scolopendrium*, *Cyrtomium*, *Matteuccia struthiopteris* and *Osmunda*, all thriving in very sheltered conditions. The garden then opens out to sunny terracing with a beautiful view and leads down to a pond and loggia, with many interesting plants including succulents such as *Aeonium*, and I spotted cactus flowering. Of particular note were *Magnolia delavayi*, *Trachycarpus*, bananas and a grove of *Tetrapanax papyrifer* all planted out. The whole garden was a delight as we turned this way and that, discovering amongst the plants many animals of stone, busts, Gaudi-esque walls, interesting objects and garden furniture (including a handsome fern bench), all delighting the eye; so much to see and discover as well as the three handsome live Dalmatians.

A big thank you to Melissa and Keith for this rare treat and the refreshing tea. I later discovered that they were featured on Gardeners' World, including film of them covering many of the plants for the winter season.

Kelvedon Hatch & South Benfleet, Essex – 17 September

Paul Ripley & Roger Golding

Eight members met at School Road, Kelvedon Hatch, on a cool day, but whose promise of showers never seriously materialised. An unpromising suburban entrance (51/5722.9894) led us into a largely unmanaged wood, known as The Coppice (51/5735.9916), surrounding

the head of a very boggy stream. The wood was very shady, and we soon found *Dryopteris filix-mas*, *D. dilatata* and *Pteridium aquilinum*. *Struthiopteris* (*Blechnum*) *spicant* was of interest, as this is uncommon in Essex, and we soon encountered more and more *Dryopteris carthusiana*. There were a couple of clear candidates for *D.* × *deweveri* and although most spores were shed, specimens were taken for further examination. In areas where spoil had possibly been dumped in the past, we found *Polystichum setiferum*, *Dryopteris affinis* and *Asplenium scolopendrium*, while in one very wet area there was a large stand of *Equisetum telmateia*.

We took our lunch in a sunny glade, sitting on a fallen tree trunk and surrounded by *Dryopteris filix-mas* and *D. borreri*. There were at least two forms of the latter, one of which was quite difficult to distinguish from *D. filix-mas*. What was really unexpected, however, was to find *Polystichum aculeatum*. It was growing with *P. setiferum* and again specimens were taken for examination of possible *P.* × *bicknellii*.

Five of us then travelled on to Paul Spracklin's amazing garden at South Benfleet. Paul was away but we were shown round by Tim Pyner who knows the garden well. The garden overlooks the Thames near Canvey Island and clearly enjoys a mild climate. It is an apparent tropical paradise, with cacti, some nearly seven meters tall, agaves and many other subtropical genera. Of the ferns, *Polystichum lonchitis* growing happily between (Turkish) tufa rocks, a crenate *Asplenium ceterach* from Ireland, *Paragymnopteris marantae*, *Anemia phyllitidis* (recently acquired as *A. mexicana* and surely not winter hardy), *Astrolepis sinuata* and another *Astrolepis* (probably *A. laevis*) from Mexico particularly caught the eye. There were very fine plants of *Lomariocycas* (*Blechnum*) *magellanica*, *L. cycadifolia* and *Oceanopteris* (*Blechnum*) *cartilaginea*. A couple of *Dicksonia antarctica* plants were here, but Paul finds it difficult to prevent these from attack by squirrels.

We enjoyed tea and cake on Paul Spracklin's patio, overlooking what could have been Mexico. A pleasant end to a most satisfying and varied day. Thank you Tim!

Autumn Indoor Meeting, Oulton Broad, Suffolk – 'A New Member's Warm Welcome' – 28 October

Mandy Gluth

Having joined the BPS in August 2017, I received a very friendly and welcoming e-mail from Tim Pyner with the programme for the East Anglia Regional Group. I was pleased to see that an indoor meeting was being held at the home of Gill and Bryan Smith, not too far from my home in North Norfolk. A very warm welcome greeted me, with smiling faces urging me to come and look at the ferns in the garden. It was heavenly, with more varieties of ferns than I have seen in botanic gardens.

A little later we were called in for a wonderful two-course lunch prepared by Gill and Karen Munyard. Then it was time for some fresh air and another trip to the garden to look at all the ferns that had been brought for sale. I was delighted to find four that I had never heard of before; they are currently doing very well having been potted on and kept in a cool conservatory.

Now the audience was getting ready for the presentations. There was space for all 18 of us to be seated and have a good view of the screen and we were treated to pictures of the most wonderful exotic trips with fabulous scenery and habitats. Afterwards, Gill supplied all the requests for merchandise and I treated myself to a double lens plus a BPS lanyard for it.

I was invited by Bryan to display the specimens I had brought from my own garden for identification and I am greatly indebted to Bryan, Julian Reed and Gert-Jan van der Kolk for identifying all of them.

A wonderful afternoon drew to a close. I really did feel as if I were part of a great big happy family. Thank you Bryan, Gill and the East Anglia Group.

MANCHESTER AND NORTH MIDLANDS

Fern planting at Jodrell Bank, Macclesfield, Cheshire – 27 September

Yvonne Golding

Back in 2012, at the invitation of head gardener Becky Burns, some Manchester Group members took spare ferns to plant in the woodland at Jodrell Bank. We made a small stumpery and planted ferns that would be happy in the woodland site. Five years on, Alison Evans, Henry Folkard and I returned for more fern planting, this time helped by regulars from Jodrell Bank Volunteer Gardeners. Becky had successfully applied for a small grant from the BPS Centenary Fund to buy more ferns for the site, and thus 54 ferns were purchased from member Neil Timm who runs The Fern Nursery in North Lincs. Chosen for their suitability for the dry woodland shade, they included *Asplenium scolopendrium*, *Dryopteris affinis* 'Cristata the King', *D. filix-mas*, *Polystichum aculeatum*, *P. setiferum* and *Polypodium vulgare*, plus a few spares that we bought ourselves. It was a very successful and enjoyable day, and hopefully we helped inspire the Jodrell volunteers to get planting ferns in their own gardens.

photo: Becky Burns

Yvonne Golding & Henry Folkard with the volunteer gardeners at Jodrell Bank

The sad part of the day was that we were due to be joined by John Grue who was part of the original BPS fern planting team but a few days before he had a very serious accident on his bike. He ended up unconscious in the trauma unit at Stoke hospital with some severe injuries. However, he made some improvement and was later transferred to Salford Royal Hospital where, at the time of writing, he was making steady progress. Our best wishes go out to John, his wife Ann and their family for his recovery.

MIDLANDS

Matt Busby

Ferns around Kenilworth, Warwickshire – 25 June

Unfortunately, due to various family commitments, only three of us were able to attend our first meeting of 2017, the aim of which was to update my field notebook on the distribution of ferns around Kenilworth.

The afternoon began with a short stroll along the Kenilworth Greenway (42/297731), the route of the old railway connecting Kenilworth with Berkswell. The line was taken up in 1965. On our route to the Greenway, we passed a row of houses, the front gardens of which had *Athyrium filix-femina*, including two or three nicely crested forms. Along the Greenway, we noted *Equisetum arvense* and *Asplenium scolopendrium*, the latter being abundant in the area. Further along, in a shallow cutting formed by outcrops of sandstone, we encountered a lot more scollies, together with *A. adiantum-nigrum*, *A. ruta-muraria*, *Dryopteris dilatata*, *D. filix-mas* and *Polystichum setiferum*. Mention must be made of the ever-present *Pteridium aquilinum*. Had we gone on further, we would have encountered the rail bridge across Blind Lane, which is, to the best of my knowledge, the only site in the area for *Asplenium ceterach*.

The second site was the sandstone bridge (42/293724) that carries Park Road over a shallow valley stream and grassy space used as a children's play area. Here we were able to scrutinise the walls on which various varieties of *A. scolopendrium* abound. I felt that my two companions, Peter Grimbly and Mark Morgan, were suitably impressed with the number and quality of the varieties present. Also present on this bridge were *A. ruta-muraria*, *A. trichomanes* and *Dryopteris filix-mas*.

Encountering one or two short, sharp showers, we quickly made our way to the home of my friend Mrs Barbara Mead who had very kindly invited us to call in for light refreshments. Rested and revived, we thanked Barbara for her kind hospitality and made our way some three hundred yards to the church of St Nicholas. On the sandstone of the low entrance wall we were able to admire a large plant of *Polypodium interjectum*, a species not commonly met with in this part of Warwickshire. Until recently, there were two fine plants growing on top of a high wall nearby but the wall had been lowered and the polypodiums destroyed. As far as I know, the St Nicholas plant is the only *Polypodium* in the area. Alongside the church are the medieval remains of St Mary's convent, now used as a garden of remembrance. Here the ancient walls supported large plants of *Asplenium adiantum-nigrum*, *A. ruta-muraria*, *A. scolopendrium*, *A. trichomanes* and *Dryopteris filix-mas*.

My thanks to Barbara Mead for the refreshments, and to Mark Morgan and Peter Grimbly for their very amiable company.

Clive & Doreen Brotherton's Garden, Dudley, West Midlands – 10 September

In spite of the very breezy and chilly day with frequent rain showers, the six members that accepted Clive and Doreen's invitation to visit their garden at Sedgley near Dudley received a very warm welcome. Clive and Doreen's interest in alpines and longstanding membership of the Alpine Garden Society is always very evident from the delightful alpine plants on display, many of which are at their best during the spring and early summer. Several were flowering at the time of our visit and provided much interest. I particularly enjoyed the *Disa kewensis*, *Weldenia candida*, *Calceolaria* and the many never-failing *Cyclamen hederifolium*. Clive's heated propagation greenhouse has a most interesting mix of alpine ferns and flowers. I especially enjoyed seeing a large plant of *Adiantum asarifolium*, *Davallia bullata* and *Mildella fallax*. There were many species of ferns at varying stages of development, and an array of tillandsias suspended on wires close to the greenhouse glass.

We retired from the brisk breeze that brought along a number of short sharp showers, noting on the side veranda a very attractive display of *Gesnaria* including *Achimenes* (hot water plants) of various colours. Our most sincere thanks to Clive and Doreen for a very interesting afternoon, and to Doreen for kindly providing the most delicious refreshments. Although we have had the privilege of visiting their garden many times over the years, it never fails to impress, and we could do so much better by following Clive's example.

NORTH WALES

David Hill

Unfortunately, 2017 didn't see any official meetings for the North Wales branch, principally due to me spreading myself too thinly. I only managed two field visits during the year, the first to Carrog, and the second to Cwm Clyd.

Carrog BioBlitz, Conwy (v.c. 49) – 11 June

Carrog (23/766477) is a National Trust property tucked away in a remote valley near Cwm Penmachno in Snowdonia National Park, and was the venue for a Cofnod BioBlitz. I attended to look at both pteridophytes and lichens with Dave Lamacraft and fellow lichen apprentice Phil Layton. Conditions in this exposed location, even by North Wales standards, were atrocious, and seriously hampered our exploration of the area. However, the start of a list was made.

The upland ffridd (rough steep ground between cultivated enclosed lowlands and the open mountain, typically acid slopes of bracken, gorse and scatted trees) held a mix of *Athyrium filix-femina*, *Pteridium aquilinum*, *Oreopteris limbosperma*, *Struthiopteris* (*Blechnum*) *spicant*, *Dryopteris filix-mas* and *D. dilatata*. In amongst these a large scruffy *D. cambrensis* stood out, along with what I assumed was a very large *D.* × *complexa*. I sent a sample to Tony Church on Arran, and he kindly corrected me, confirming this as *Dryopteris oreades*. Others confirmed included *D. cambrensis* subsp. *cambrensis*, and there was a questionable *D. affinis* 'convexa'.

Trees next to the river supported *Polypodium vulgare*, and a rock outcrop high above the farm had a nice population of *Hymenophyllum wilsonii* (23/7680.4775). The only wall examined had *Asplenium trichomanes*, *Cystopteris fragilis* and a good range of *Polypodium*. There looked to be good candidates for *P. cambricum* at one end and *P. interjectum* at the other, with a large possible *P.* × *shivasiae* in the middle, however, a visit is needed in the winter to collect fertile material in order to check species determinations.

Cwm Clyd, Gwynedd (v.c. 49) – 8 July

photo: D.G. Hill

***Lycopodium clavatum* strobili, Cwm Clyd, Snowdonia**

In preparation for the Scotland meeting, I went on a lung-busting climb to Cwm Clyd (23/635597), near Cwm Idwal in Snowdonia, in an unsuccessful hunt for pillwort. This high cwm has good populations of clubmosses including *Diphasiastrum alpinum*, *Huperzia selago* and a lovely show of *Lycopodium clavatum* with strobili. Scattered amongst the scree were *Cryptogramma crispa*, *Cystopteris fragilis*, *Oreopteris limbosperma*, *Phegopteris connectilis* and *Struthiopteris spicant*. Colourful splashes of roseroot (*Sedum rosea*), mossy and starry saxifrages and lesser meadow-rue (*Thalictrum minus*) hinted at base enrichment, along with *Asplenium viride* and *Selaginella selaginoides*, but a solo venture onto the cliffs needed to be saved for a dry day.

Gardeners' Question Time Garden Party, Ness, Wirral – 16 September

Michael Hayward, Ann Haskins, Vanessa Griffiths and I manned a stand at the Gardeners' Question Time 70th Anniversary Garden Party at Ness Botanic Gardens. At short notice Brian and Sue Dockerill kindly prepared and sent me a selection of spores for distribution (which proved incredibly popular) and Michael's wonderful ferns and propagation unit drew people in. The outstanding effort made by all portrayed the Society in an excellent light, in what turned out to be an incredibly busy sell-out event.

NORTH-WEST

Cautley Spout, near Sedbergh, Cumbria – 24 June **Bruce Brown**

Our original plan for this joint meeting of Yorkshire and North-West Group members was to visit Moughton Fell near Ingleborough, but continuing juniper disease meant that group visits were being discouraged, so we opted for a return to Cautley Spout, hoping for better weather than in 2013 when it poured down and the beck was a raging torrent. Fortunately, it was much kinder this time and the water level low enough for multiple crossings, although still demanding some agility to progress up the gorge. Maybe this affected our numbers as only four turned up. Nevertheless it is a fabulous place to explore, full of ferns of great variety, both acid-loving and calcicolous types in close and bewildering profusion. The gorge has exploited a geological weakness in the acidic Silurian Slate, cutting through to some more basic rock elements in places.

From the parking area at Cross Keys (34/698969) we followed the well-worn path towards the glaciated U-shaped valley head, with the spectacular falls of Cautley Spout beckoning us on. Our route and the ferns seen were very similar to those in the 2013 *Bulletin* report. *Dryopteris cambrensis* was the commonest of the *D. affinis* complex, with some *D. affinis* in the lower gorge but only one definite *D. borreri* was noted. The base of the screes dropping down from Yarlside is worth a detour for *Gymnocarpium dryopteris*, *Cryptogramma crispa*, and *Dryopteris oreades* in its classic block-scree form with small upright fronds. It becomes more luxurious on rocks close to the falls.

Mike Canaway re-found *Asplenium trichomanes* subsp. *trichomanes* in 2016, not recorded since 1988, so we were keen to see this, hiding on a rocky crag close to the beck and involving another crossing. One or two other candidates have since been found among the more common subsp. *quadrivalens*. We noted *A. adiantum-nigrum* by a large ash, before lunching on a pleasant grassy bank next to *Hymenophyllum wilsonii* and watching the antics of a pair of ring ouzels feeding their young. Close by, the rocks were dripping with calcium-enriched water judging by the presence of *Asplenium viride*, *Polystichum aculeatum* and spikes of *Selaginella selaginoides* growing well below.

After a steep exit from the gorge we re-joined the stepped public footpath to bypass the main waterfalls and so reach the pools above. On the far side was a crag with a nice colony of *Phegopteris connectilis* and another putative *A. trichomanes* subsp. *trichomanes* (later confirmed by its smaller spores). By coincidence, an adjacent crag was home to the rare serrated wintergreen (*Orthilea secunda*), which has just a few sites in the Lakes outside its Scottish Highland heartland; thanks to Jeremy Roberts for alerting us to this, an exciting plant to see and a highlight of our day. These acid-loving plants were complemented by bilberry and more *Hymenophyllum* just upstream, and yet in just a few more metres was a

dripping crag with calcicolous *Cystopteris fragilis*, *Asplenium viride*, etc. The trees here were adorned with *Polypodium vulgare* (34/681975).

photo: A.J. Evans

Cautley Spout, Cumbria

Tony Moverley, Mike Canaway & Bruce Brown at the first site of *Asplenium trichomanes* subsp. *trichomanes*

We didn't have enough time to climb up to the top fall, so missed out on the *Huperzia* there, but managed to record 24 taxa and were able to rest and enjoy the fantastic views before a leisurely descent back to the valley below, now in pleasant sunshine.

Scutchers Acres south of Burscough, & Steve Coleman's garden in Maghull, Lancashire (joint meeting with Liverpool Botanical Society) – 26 August Alison Evans

The stimulus for our visit to Scutchers Acres (34/451108) was the discovery of a plant of *Polystichum munitum* growing wild here about three years previously. This native of western North America had been recorded as a garden escape in Surrey and in East Cornwall, but not previously in Lancashire. John Watt has managed the Scutchers Acres site for wildlife for the last 20 years, so we were most fortunate to be guided by him around this fascinating site, which has around 100 tree species, and wide general botanical interest in addition to an interesting fern flora.

Twenty of us met on a lovely sunny day in a private parking area belonging to John's neighbour. John outlined the history of the site, named after the Scutchers Arms, a local pub no longer in existence. Flax that was grown on the site had to be 'scutched' or beaten to separate the fibre. Part of the site was previously used as a tree nursery. Since John acquired the site in 1997, around 20,000 native trees and shrubs have been planted. There were plenty of flowering plants to distract us before we entered the woodland on the north side of Ellerbrook and recorded *Athyrium filix-femina*, *Dryopteris dilatata*, *Asplenium scolopendrium*, and the only plant of *Struthiopteris* (*Blechnum*) *spicant* that we found, at 34/4522.1074. A little further along the river bank there was *Polystichum setiferum*, completely overshadowed by a massive specimen of *Dryopteris affinis* subsp. *affinis* at 34/4511.1064. This had the characteristic half-adnate lowest basiscopic pinnules and persistent sori, but particularly around the mid-frond

was rather more lobed and toothed than is usual for this taxon. This seemed to be the pattern for the other large specimens of *D. affinis* subsp. *affinis* that we found. We continued along the side of the river, noting a fine red-stemmed lady fern on the way, to a more recently acquired area of land, Flax Fields, which is maintained as a wild flower meadow and community orchard. We then took turns to push our way through the vegetation to a narrow section of the river bank, where there were magnificent specimens of *Polystichum aculeatum* and *P. setiferum*, interspersed with the woodland ferns already recorded plus *Dryopteris filix-mas*. A colony of polypodies on a fallen log in the stream proved to be *Polypodium interjectum*.

We then crossed the river by way of Flax Lane, noting *Equisetum arvense* on the roadside, and walked along the track on the south side, recording *Polypodium vulgare* along with other woodland ferns at 34/4505.1046, near to the forest classroom. Our next stop was close to Hobcross Lane to see the *Polystichum munitum* at 34/4530.1050, then a brief stop to see *Pyrola minor*, now in seed.

After lunch, we walked along another woodland track, noting a plant of *Dryopteris affinis* subsp. *paleaceolobata* at 34/4514.1062, on the way to a collection of scaly male ferns at 34/4511.1057, including *D. borreri* and several plants of *D. affinis* subsp. *affinis* that had varying degrees of toothing and lobing. A further trek through brambles took us to another specimen of *D. affinis* subsp. *paleaceolobata* at 34/4499.1051, immediately next to a 'normal' *D. affinis* subsp. *affinis*, and close to a rather linear form of *D. filix-mas*.

We then returned to the cars along Flax Lane, and moved on to Steve Coleman's garden in Maghull, where we were pleased to see several more BPS members already enjoying tea and cakes. Steve is a cultivar man: in about six years, with the support of other members, he has assembled an outstanding collection of cultivars, mainly *Polystichum*, *Athyrium* and *Polypodium*, impressively shaded by tree ferns. He is breeding ferns too. Heaven knows where any more plants are going to go. There was much to see, learn, and discuss here – a perfect way to round off the day.

Thirlmere & Launchy Gill, Lake District National Park – 16 September

Bruce Brown

Eleven of us met by the bridge over Launchy Gill on the quiet road hugging the western shoreline of Thirlmere (35/309158), blessed with a nice sunny day. I think it was back in 1996 when the North-West Group last met in this area, a walk led by Mike Porter and coupled with Ken Trewren's knowledge they found 22 taxa, starting from a bit further north near Armboth.

By the parking lay-bys we noted *Athyrium filix-femina*, *Pteridium aquilinum*, *Dryopteris filix-mas*, *D. borreri*, *Struthiopteris* (*Blechnum*) *spicant*, and *Polypodium vulgare* spreading along the wall tops. On looking over the bridge parapet, *Polystichum aculeatum* was spotted by Launchy Gill, and by the stile beyond was a single plant of *P. setiferum* (not recorded in 1996). The Forest Trail setting off from here was officially closed due to past storms demolishing the footbridge over the gill higher up, but our route didn't cross the gill so we persevered up the path, noting big stands of *Oreopteris limbosperma* and delighted by attractive colonies of *Phegopteris connectilis* and, further up, *Gymnocarpium dryopteris*.

Time was spent discussing and contrasting the characters of *Dryopteris affinis*, both subsp. *affinis* and subsp. *paleaceolobata*, and *D. cambrensis* as we progressed steeply up the path, zig-zagging alongside Launchy Gill. We veered south-east, eventually reaching a huge boulder perched precariously, an obvious erratic left by retreating glacial ice, and with an incredible panoramic view along much of Thirlmere to Blencathra in the background (35/309156). A great place here for photos and lunch.

But not before we had explored the areas of boulders and scree behind. Amongst the many *D. dilatata* we were able to identify a couple of *D. expansa* plants (confirmed microscopically later). *Huperzia selago*, *Cryptogramma crispa* and *D. oreades* in its natural small upright block-scree growth form were present, which seemed to tie in with the 1996 meeting where *D. expansa* was recorded. Some members examined the lower rock-face of Thackmell Crags above finding an interesting *Asplenium trichomanes* that turned out after a microscopic check on spore size to be subsp. *trichomanes*.

photo: A.J. Evans

Thirlmere

Robert Crawford, Roy Atkins, John Grue, Clare Shaw, Bruce Brown, Mike Canaway, Carmen Horner, Robert Sykes, Phill Brown, Trevor Lowis

After descending back to the roadside, we followed it south for a half mile. *Hymenophyllum wilsonii* was noted on both rock and tree base just above the road. The walls were adorned with *A. trichomanes* subsp. *quadrivalens*, *A. scolopendrium* and eventually *Cystopteris fragilis* was found. A lot of *Dryopteris oreades* was present in a more luxuriant form than seen above in scree and *D. borreri* 'foliosum' was also spotted on the way back.

A final call was made at Dobgill car park (35/316140) about a mile south, to see the *D.* × *complexa* over the wall opposite, recently confirmed after being found last year. Our fern tally for the day agreed closely with the 1996 visit, taking into account the splitting of the *affinis* complex (not recorded then), our only omissions (*D. carthusiana*, *Asplenium ceterach* and *A. adiantum-nigrum*) being plants occurring near their start point further north.

Annual General Meeting, Holehird, South Cumbria – 21 October Robert Sykes

Twenty-nine members and friends met as usual at Holehird, the home of the Lake District Horticultural Society, and, as usual, their volunteers were most helpful with the routine stuff: setting out, providing a projector and clearing away.

We had two excellent talks. Martin Rickard talked about *Ferns in south-western gardens*, a tour from just south of Birmingham down to Cornwall, and very lovely they were. John Grimshaw told us about *Ferns and other plants in a Yorkshire garden*. He lives at Settrington in North Yorkshire, which is a beautiful but horticulturally challenging place, cold at times and windy. It was fascinating to hear how an expert meets these problems.

At the formal meeting we reviewed the past year and planned the next. We seemed to be accumulating money, and wondered whether to have a party, make a donation to the BPS, or run a bus to the Fibrex meeting next July. Robert Sykes and Ann Haskins were reappointed as secretary and treasurer respectively.

The newly published second edition of *Polystichum cultivars* was available and a good many were bought. There was a good plant stall, which yielded £125. Martin judged the fern competition: Julia Wilkins won the hardy fern class and Colin Billington the indoor fern class. Melville Thomson won the cryptic competition set by Alec Greening.

SCOTLAND

Fatlips Castle, Roxburghshire – 1 April — Bridget Laue

The call to visit Fatlips Castle on the morning of April 1st was not a joke. In recent times this is the only location in Scotland south of Edinburgh where the forked spleenwort, *Asplenium septentrionale*, has been recorded and we were intent on monitoring the population. Fatlips Castle is a small 16th-century tower, restored in the 1800s and again renovated five years ago, which sits atop Minto Craigs about halfway between Hawick and Jedburgh. Leaving our cars at the end of a track below the hill, we climbed a very muddy trail in soft but persistent drizzle. This early in the year there were very few ferns evident to delay our progress. Despite the weather, on reaching the top of hill (c. 220 metres) we were treated to splendid views across the River Teviot some 150 metres below. *A. septentrionale* favours south-facing rock-faces, so we headed for some outcrops just below the castle (36/582209). Even though we were at the precise location, we still needed help from Frank (who had recced the site) to spot the ferns. There were two small rather unimpressive clumps, perhaps three plants in total, quite a contrast to the thriving population we had seen in 2016 near Dunkeld. The only other ferns seen near the castle were *Polypodium*; Heather thought we saw both *P. vulgare* and *P. interjectum* during the day. We returned to our cars for lunch.

photo: P.M. Sharp

In the rain at Fatlips Castle, Roxburghshire
Frank Katzer, Bridget Laue, Cliff Davies, Christine Nicholson, Heather McHaffie

Historical records indicated a much more numerous population of *Asplenium septentrionale* on Minto Craigs. From below we could see that there were various other rocky outcrops along the Craigs to the south-west of the castle, so after lunch Frank led a reduced party up some difficult slopes, determined to inspect these other possible sites. Initially these rocks seemed promising because they were host to other *Asplenium* species: a few *A. trichomanes* and quite a number of *A. adiantum-nigrum*. However, about an hour's hunting turned up no more *A. septentrionale*. Of course, we might have missed some plants, but it seems as though this population is clinging on by the merest thread. Disappointed, we departed the site and revived our spirits with an enjoyable debriefing at a tea shop in Hawick.

Ascog Hall Fernery, Isle of Bute – 2 May — Frank McGavigan

(*Participants*: Janey Floyd, Mary Gibby, Tim Godfrey, Bridget Laue, Frank McGavigan, Maurice Wilkins.)

The trouble with our annual maintenance trip to Ascog Hall (26/107631) is not the lack of willing participants, as it is such a wonderful Victorian fernery and you genuinely feel that you are doing something useful to help. Rather, Bridget found it difficult to find a date to

suit all those who wanted to come; that explained the smaller turnout this year. Our hosts, Michael and Karin Burke, were as always very welcoming.

At first glance the fernery looked in good shape, with the ferns green and lush. The Burkes had arranged for someone to water regularly, so this essential aspect of care takes place even when they are away. Closer inspection found some ferns growing into others (including a *Woodwardia* impinging on the famous *Todea barbara*), ferns outgrowing their allotted space, and ferns (especially *Woodwardia* and *Osmunda*) sprouting up where they were not wanted. Dead fronds were cut away, unwanted ferns removed, and those dreadful intruders, flowering plants, annihilated. As every year, we attempted to clear some of the mind-your-own-business (*Soleirolia soleirolii* – sometimes known as the Corsican curse, and it certainly has Napoleonic ambitions to take over the world). It is satisfying to remove this menace and reveal what is being smothered; but also dispiriting as you know that when you return the next year it will be as bad as ever.

Then Tim discovered that there was rot in the wooden members that sit on top of the sandstone walls and support the metal struts that hold the glass roof in place. It was decided to clear the overgrowth from the rest of this wood to allow it to dry out. Luckily most was solid and unaffected, but the rotten areas will need to be treated, or possibly even replaced – just one of the many costly tasks faced by owners of Victorian ferneries.

We took advantage of beautiful weather to tour the rest of the garden where the Burkes had been busy making improvements. Karin as always treated us to delicious home-made refreshments, which we enjoyed outside with the sun warming our backs – a most enjoyable day. I hope the next contingent has it so good.

NTS Arduaine Garden, Oban, Argyll – 17 June — Tim Godfrey

We met on a cool, drizzly but calm morning at Arduaine (17/798105), ideal conditions for our main targets of ferns, but also enjoyed by the extensive rhododendron collection in the garden, and one or two midges that followed us around. Our small group expressed differing interests in the pteridophyte flora we might see, with the choice being native ferns as opposed to exotic species and varieties, but at the end of the day I think everyone was more than content with what the garden had to offer. This included (it is impossible to ignore them!) discussions on the huge range of higher plants, the often tender trees and

photo: M. Wilkins

NTS Arduaine Garden, Oban, Argyll
Ian Schoolar, Tim Godfrey & Kevin Byrne inspecting *Woodwardia radicans*

shrubs that benefit from the exceptionally mild Atlantic influence, many of which had been grown and planted by Maurice during his long tenure as the Head Gardener. It was pleasing that his replacement, Gregor Anderson, who was able to join us for part of the day, enjoyed the benefit of some inside information regarding the plant collection.

Our day was divided into two, with a break for a snack lunch in the nearby Loch Melfort Hotel, the former home of the Campbell family who began the development of the garden from a barren windswept promontory in 1898. Subsequently, the plant collection was considerably enhanced under the tenure of Harry and Edmund Wright, who later passed ownership to the National Trust for Scotland. In the morning we concentrated on the more open areas of the garden, with their network of winding paths, ponds and a plethora of species of *Dryopteris* and *Polystichum* and their varieties planted amongst the shrubs and trees. Here, Maurice pointed out a huge clump of *Dryopteris affinis* agg., estimated to be possibly hundreds of years old (see *Pteridologist* volume 5, page 471). Much to Kevin's delight we found one of his target species for the day, *Cystopteris fragilis*, on some low rocks, although the other one on his list, *Dryopteris carthusiana*, eluded us.

In the afternoon we entered the elevated woodland to the western end of the garden, closer to the Atlantic storms but well protected by a wide and high shelter belt of *Griselinia littoralis* (which grows to enormous proportions here) and an overhead canopy mainly of larch and other conifers. This larch is now under threat of attack by the pathogen *Phytophthora ramorum*, and if felling becomes necessary then surely the under planting of large and tender rhododendrons would suffer considerably. There were many tender ferns in this woodland too, including an enormous *Lophosoria quadripinnata* with fronds estimated to be four to five metres tall! My own favourite was *Lomaria* (*Blechnum*) *discolor*, which was sporing around freely, as it was so redolent of the beautiful forests in parts of New Zealand. Tree ferns, mainly *Dicksonia antarctica*, were also sporing freely, and one day could form an understorey canopy such as can be found in its native haunts in south-east Australia. Several plants of *Thyrsopteris elegans*, an endemic tree fern from the Juan Fernandez Islands in the Pacific, were thriving here too, and it will be interesting to see if, in time, they develop a trunk.

All in all it was a very interesting day, much enjoyed by our small group.

Ben Vrackie, Perthshire – 5 August — Andy MacGregor

(*Participants:* Max Brown, Jim Downie, Liza Downie, Zoe Gardner, Bridget Laue, Andy MacGregor, Paul Sharp.)

This was our eagerly awaited return to the lovely wee mountain of Ben Vrackie, which sits conveniently beside Pitlochry. I say 'wee' – at 841 metres it is just shy of being a Munro but is no less impressive (or steep). In 2016 we started out in search of mountain bladder fern (*Cystopteris montana*) and holly fern (*Polystichum lonchitis*), each reputed to have a few fronds hanging out on some ledges a mile beyond the summit. We never made it. In fact, we never made it to the summit, hopelessly diverted as we were by some juicy crags lower down that had moonwort and green spleenwort, and various unusual alpine things with flowers on them. This time we were determined to push through, and donned blinkers and earplugs (metaphorically of course, for these are not sensible attire on a mountain hike). Needless to say they were not completely successful, and a good thing too: a brief stop at a base-rich flush to reacquaint ourselves with Scottish asphodel, *Selaginella selaginoides* and some other nice plants that we found in 2016, turned up loads of variegated horsetail (*Equisetum variegatum*), which we had somehow contrived to miss previously. (The hill is generally well appointed with horsetails – we also saw the field, shade, wood, marsh and water varieties, and Dutch rush has been recorded.) For the benefit of attendees who were not on the 2016 mission, we did also step off the path briefly to admire the colony of interrupted clubmoss (*Spinulum* (*Lycopodium*) *annotinum*). Other clubmosses – stag's-horn clubmoss (*Lycopodium clavatum*) and fir clubmoss (*Huperzia selago*) were both seen fairly frequently higher up the mountain.

Blinkers repositioned, we did eventually make the summit (27/951633) and then struck off towards Creag Tharsuinn, where mountain bladder fern and holly fern had previously been reported. We had no records for mountain bladder fern after 2011, and at that time only two rather decrepit fronds were seen. The record for holly fern was rather older. Armed with directions from Fred Rumsey, we were delighted (if not entirely surprised) when we found them both! There were two plants of mountain bladder fern, one with a single frond and the other with four, all a bit bedraggled, and three healthy-looking plants of holly fern, one next to some lemon-scented fern (*Oreopteris limbosperma*). Both target species were found in the same location as previously recorded (27/960637), on a localised section of wet, flushed crags supporting a number of other base-loving plants such as brittle bladder fern (*Cystopteris fragilis*), alpine bistort, roseroot and alpine saw-wort.

photo: P.M. Sharp

Summit of Ben Vrackie, Perthshire

Liza Downie, Bridget Laue, Jim Downie, Max Brown, Andy MacGregor

The long walk back to the foot of the mountain gave us time to review the day's ferns, including all the commoner ones seen en route, including *Pteridium aquilinum*, *Struthiopteris* (*Blechnum*) *spicant*, *Phegopteris connectilis*, *Gymnocarpium dryopteris*, *Polypodium vulgare*, *Athyrium filix-femina*, *Dryopteris dilatata*, *D. filix-mas*, *D. affinis* and *D. borreri.* As we arrived at the cars we spied a lone *Polystichum aculeatum* on the bank of a stream to add to our tally.

Indoor meeting, Edinburgh – 7 October

Maurice Wilkins

(*Participants:* Gillian Brady, Max Brown, Adrian Dyer, Tim Godfrey, Frank Katzer, Bridget Laue, Steve Munyard, Ted Munyard, Nadia Russell, Ian Schoolar, Paul Sharp, David Tricker, Alastair Wardlaw, Maurice Wilkins.)

The Scotland Group held its autumn indoor meeting at the home of Bridget Laue and Paul Sharp in Edinburgh. Tim Godfrey and I arrived early and were able to have a good look around the garden and its wonderful fern collection. We were given a list of all the ferns in the various sections – so many plants in a comparatively small area! We also had first option on the plant sales and in spite of the fact that we already had more plants than we have space for, we both ended up with several new specimens. As always, Frank Katzer brought along a good selection of fern books for sale, but these I had to resist. As others members drifted in, I was surprised to see Alastair Wardlaw arriving with several jars of

water – they contained pillwort, *Pilularia globulifera*, which I had never seen before. Needless to say I went home with one of those jars; keeping it alive will be my next trick.

photo: T. Godfrey

Bridget Laue's garden, Edinburgh

Tim Godfrey, Frank Katzer, Maurice Wilkins, Steve Munyard, Paul Sharp, Bridget Laue, Adrian Dyer, Alastair Wardlaw, Nadia Russell, Max Brown, Ted Munyard

After a lovely lunch, we were treated to two illustrated talks. First up was Max Brown from Edinburgh University, who spoke on 'Perspectives on parasitism of ferns'. While epiphytic ferns are numerous, Max's search of the scientific literature had turned up no cases of ferns acting as parasites on other plants. He speculated that the pattern of gametophyte and sporophyte cell development in ferns simply does not suit parasitism. In his own research on eyebrights (*Euphrasia*) Max is asking whether ferns can be hosts to parasites. He had been attempting to grow co-cultures of eyebrights with three different fern hosts, *Equisetum arvense*, *Pteridium aquilinum* and *Cystopteris dickieana*, as well as a range of angiosperms. The results so far suggest that of the three pteridophytes only the horsetail is a good host and he discussed his thoughts on why this might be.

Our second speaker was David Tricker, Curator of the Temperate House at the Royal Botanic Garden, Edinburgh. He told us about three expeditions to Asia, collecting ferns for public display at RBGE. The first was a visit to Nepal centred on the area north of Kathmandu and west of Langtang, at altitudes ranging from 1,500 metres up to around 4,500 metres. The second trip was to China, where the RBGE had been collecting for 30 years; on this occasion the party was based in Lijiang, Yunnan, and explored the Yulong Mountain range. While the primary targets were rhododendrons, many interesting ferns were also seen. Finally, David described a 2014 expedition to Taiwan, where botanising in the high central mountain spine of the island, where the temperature drops to eight degrees Celsius, proved to be very profitable. His talk was illustrated by many fine photographs of a wide variety of exotic ferns.

To close, Bridget reviewed the group's activities during 2017, and discussed potential excursions for 2018. After tea and cakes, the meeting finished around 4 p.m. Many thanks to both Bridget and Paul for a great day!

SOUTH-EAST

Millennium Green, Heathfield, East Sussex – 24 June — Keith Hillier-Palmer

The South-East Group was joined by several fern enthusiasts from the East Anglia region to explore at Heathfield part of the Cuckoo Trail, a disused railway line that once linked Eridge (near Tunbridge Wells) with Polegate (near Eastbourne). It was from a custom at Heathfield that the nickname 'Cuckoo Line' stemmed. At the annual April fair in that town tradition has it that a woman used to release from a basket a cuckoo – supposedly the 'first cuckoo of the spring'. The Trail here was designated one of the 245 Millennium Greens, created to provide green public spaces for communities without them.

Our party of twenty first visited that part of the trail around a now blocked-off railway tunnel (51/579216) where tall docks and water figwort plants were flowering. Around the tunnel entrance were luxuriant plants of hart's tongue (*Asplenium scolopendrium*). Our leader Peter Clare then took us into wooded areas where the usual suspects were readily discovered, such as broad buckler fern (*Dryopteris dilatata*) and hard fern (*Struthiopteris* (*Blechnum*) *spicant*), a fern of decidedly acid soils. Indeed a diversity of soil types was indicated by the presence of both the lime-loving hart's tongue and the lime-avoiding hard fern in close proximity. A pteridological excursion would not of course be worthy of the name without a regular debate about the '*affinis*' group, as likely candidates for both *Dryopteris affinis* and *D. borreri* were carefully examined. I myself felt that I learned a great deal from Roger's quiet and patient instruction about the sort of characteristics to look out for, which would point to one species or the other.

photo: P.J. Acock

Cuckoo Trail, Heathfield

Claire Williamson, Janet Bond, Ashley Basil, Julian Reed

Presently a small colony of narrow buckler fern (*D. carthusiana*) was seen, but a really good discovery was a plant of royal fern (*Osmunda regalis*) that Peter had known about in this wood but which had recently eluded him. The delicately incised fronds of lady fern (*Athyrium filix-femina*) were demonstrated and later soft shield fern (*Polystichum setiferum*) was noticed. I personally find the latter to be more common as a plant of shaded hedgebanks than of woodland. Then a single plant of hay-scented buckler fern (*Dryopteris aemula*) was located on an old tree stump. Its crisped fronds were duly noted but were eclipsed by the presence in a rather inaccessible ghyll of a large colony of the fern, with additional plants further along the ghyllside. This was the *pièce de résistance* of the

morning's fern hunting and had only recently been discovered by Peter and Julian Reed when doing a reconnaissance of the site prior to this meeting. The party had to view it in two groups since access was difficult.

The following common species can be added to complete the suite of ferns and horsetails seen: bracken (*Pteridium aquilinum*), male fern (*Dryopteris filix-mas*) and field horsetail (*Equisetum arvense*).

After this the group dispersed for lunch, re-assembling at 2 o'clock a few miles away at Janet Bond's house, 'Linden', Swife Lane, Heathfield, to view the ferns and other plants in her expansive garden and adjoining land, not to mention the dazzlingly colourful exotic bird collection. Two hours was scarcely enough for Janet's guided tour and subsequent personal exploration but we finished in her house partaking of a delightful tea provided by Janet with contributions from the Acocks! Although it had rained somewhat during our morning expedition, following several hot, dry days, everyone agreed that this meeting constituted a delightful, enjoyable and fulfilling day out. Many thanks are due to Janet, Peter, Julian, Pat Acock and Paul Ripley for organising a splendid summer Saturday!

Marline Wood Nature Reserve & SSSI, & Steve & Karen Munyard's garden, Hastings, East Sussex – 29 July

Pat Acock

Around 20 of us gathered in Napier Road (51/784121) to explore and record the ferns in Marline Wood, a Sussex Wildlife Trust Nature Reserve and SSSI. From the road we entered the woods on the public footpath, signage for which was obscured by the trees. After 20 yards we entered the wood and descended the gentle slope where we encountered *Pteridium aquilinum*, *Dryopteris dilatata*, *D. affinis*, *Polystichum setiferum*, *Dryopteris filix-mas*, *D. borreri*, *Struthiopteris* (*Blechnum*) *spicant* and *Athyrium filix-femina.*

Having agreed to meet at a bridge crossing the stream (51/781123) before going further on, we were surprisingly all together within a few minutes of each other. South-west of the bridge the stream entered a gorge that got increasingly deep. A few scurried along here while the rest were content to scout around close to the bridge where *S. spicant* was in larger

photo: B.D. Smith

Marline Wood Nature Reserve

Roger Golding, Pat Acock, Keith Hillier-Palmer, Clive Lundquist, Steve Munyard, ? (*half hidden*), Jo Basil, Tim Pyner

numbers, and we found *Asplenium scolopendrium* for the first time. Paul Ripley and Roger Golding were at the rear examining a fine *Dryopteris borreri* suspected of being *D.* × *critica*.

Following a trail south of the river, keeping along a contour above the gorge, eagle-eyed Karen Munyard saw a polypod frond on the ground and looking up saw *Polypodium interjectum* along the boughs high up in an oak tree. It was then easy to see further trees similarly hosting *P. interjectum*. A short distance further on by a marked tree, an unobtrusive path going back into the gorge was taken. There was a steeper scramble down towards the river-bed but it was definitely worthwhile as some very large clumps of *Dryopteris aemula* were found nestling on the bank above the high-water mark of the stream. Retracing our steps to the upper path, we continued along into a meadow where we had lunch. A few were willing to forego lunch to search for late-flushing *Ophioglossum vulgatum*, known to have been seen in the meadow. However, they came to the conclusion that the season was possibly too late since no trace of it could be found.

The rain started on the way back to the cars and by the time we reached Stephen and Karen Munyard's house it was torrential and we were confined to barracks. Despite the inclement weather all was not lost, as friends old and new were able to get to know each other better and share interest in each other's fern experiences whilst enjoying Karen's refreshments. A few hardy souls made it into the garden where we found that Steve's collection of plants had all grown to exceptional height and luxuriance. The delights of the greenhouses gave some shelter from the rain. Back indoors we enjoyed several more rounds of refreshment and, despite frequent mention of leaving, most members enjoyed further discourse until the end of the afternoon when our hosts were roundly thanked for filling us to the brim with Karen's delightful cakes and cream teas.

Church Wood, Wittersham, & Appledore, Kent – 21 October **Peter Clare**

Some 14 members and friends met near The Swan Inn, Wittersham, on the Isle of Oxney near Rye in Kent. We crossed the road and walked the short distance to the public footpath (51/974298) that led down to a gated trackway. Along here we saw *Equisetum arvense*, *Pteridium aquilinum* and, nearer the wood itself, *Polystichum setiferum*. We entered Church Wood, scrambling down a steep path that led to a large, basin-like area, with steep banks all around and a small stream-bed running across it. More *P. setiferum* and a solitary *Asplenium scolopendrium* were growing here. On the steeper bank behind us were *Struthiopteris* (*Blechnum*) *spicant*, *Dryopteris borreri*, *D. filix-mas*, and what was thought to be a good candidate for *D.* × *critica*, but later tests proved it to be *D. affinis* subsp. *affinis*. There was a very narrow gully (had it been Sussex I would have said ghyll) running down towards us, and when we had clambered up its steep and slippery bed we were rewarded by the sight of several plants of *D. aemula* growing on its banks. There was also an interesting *Polystichum setiferum* with a hint of *P. aculeatum* about it, as well as several plants of *Dryopteris dilatata*.

On our exit from the wood, we had a flying visit from Storm Brian, bringing heavy, squally gusts and near horizontal rain! We were very glad of the cover afforded us by a line of ancient coppiced hornbeams that bound that side of Church Wood.

After a superb hot lunch, kindly provided by Paul Ripley and Lindsey Holleworth, and a chance to view Paul's fern collection in Appledore, we re-grouped at the local sports hall, where we were treated to illustrated talks by Pat Acock on Hawaii, Roger Golding on an anti-clockwise circuit of Ireland in 20 days, Paul Ripley on Mexico, and Julian Reed on the RHS Hampton Court Palace Flower Show, events at RHS Wisley, Great Dixter Autumn Plant Fair, and the re-finding of 'lost' *Athyrium filix-femina* cultivars in old gardens.

Many thanks to them for their interesting presentations, and to Paul and Lindsey and Pat Acock for yet another successful end-of-season meeting. Paul announced that he and Pat would be standing down as the South-East Group leaders, and would be handing over to Julian Reed and Peter Clare. We owe Pat and Paul grateful and heartfelt thanks for all the hard work and dedication they have shown us over more than 30 years! They will surely be a very hard act to follow!

SOUTH WALES AND THE BORDERS

Herbarium, National Museum of Wales, Cardiff, Glamorgan – 19 June

Sue Dockerill

On a blisteringly hot day, eight members met at our garden in Pontypridd to relax, catch up and have some refreshments. After lunch, we made our way the few miles to the centre of Cardiff where we were met at the museum by Curator of Botany, Sally Whyman. She led us up to the herbarium where we were welcomed by Head of Botany, Chris Cleal.

Our visit began with looking at an array of fern pictures selected by the curator of botanical illustrations, Heather Pardoe. First, she showed us some of the oldest items in the collection from the nineteenth century *Flora Danica*, which were exquisite line drawings of *Oreopteris limbosperma* and a collection of *Hymenophyllum* species. Almost as old were some coloured illustrations from *Flora Londinensis* drawn by William Hooker. These included *Dryopteris cristata*, sadly no longer in the London flora! From the 1850s were some beautiful nature prints of ferns comprising huge plates of both single fronds and assemblages of several smaller species. Bringing us up to date was a range of illustrations by Jill Smythies. Very different from the other material, these displayed the ferns in their natural habitats rather than looking like herbarium specimens and showed how pleasing such representations could be.

After looking over the illustrations, Chris Cleal showed us some fossil 'ferns'. These were from the coal measures at a large open-cast mine near Merthyr Tydfil and typical of the types found in such locations. He put the term 'fern' in quotes as, although these looked ferny and had originally been classified as ferns, further research had shown that they were in fact angiosperms.

We then turned to the herbarium itself, where Sally had set out a number of bound herbaria, and she also retrieved any Welsh fern records that we wished to look at. There was an interesting book of specimens of New Zealand ferns, and Martin Rickard was particularly pleased to see a copy of *A companion to the fernery* by Frederick Brocas – the copy he had almost bought over 30 years ago! At Martin's request we also looked at the herbarium specimens of *Polypodium cambricum*, which enabled us to note some possible sites for future field visits. So, on that happy note, we gave our thanks to the Museum staff and descended to our hot cars for the journey home.

Downton Gorge, Herefordshire – 27 July

Brian Dockerill

Seven of us met at the Ludlow Food Centre to reduce to two cars for the short drive to the unusual castellated bridge near Downton Gorge (52/454749). Here we met Simon Cooter of Natural England, who lease and manage the site as a National Nature Reserve. Within the gorge is a landscape park developed in the late eighteenth century by Richard Payne Knight who had rejected the style of park previously made fashionable by Capability Brown in favour of the 'picturesque'. Simon had brought a folder of pictures, often from the park's heyday, and many of the group found this history at least as fascinating as the ferns we were to find.

After looking at the *Asplenium trichomanes* subsp. *quadrivalens* and *A. scolopendrium* on the bridge we took the forest track west on the south side of the river Teme towards the gorge. Within about three quarters of a mile we reached Castle Bridge (52/444742), by which time we had already seen many of the ferns of the area, adding *Athyrium filix-femina*, *Dryopteris affinis*, *D. borreri*, *D. cambrensis*, *D. dilatata*, *D. filix-mas*, *Polypodium vulgare*, *Polystichum aculeatum*, *P. setiferum*, *Pteridium aquilinum* and *Struthiopteris* (formerly *Blechnum*) *spicant*. Also in this part of the walk we saw an unusual *Polystichum*, which was regarded as a possible *P.* × *bicknellii*. A sample was taken by Martin Godfrey who later, after microscopic examination of the spores, confirmed that this was the case.

photo: S.C. Dockerill

Martin Godfrey & Martin Rickard discuss a *Polypodium* at The Roman Bath House in Downton Gorge

After crossing the bridge, on which we noted *Polypodium interjectum*, we continued on the northern, more alkaline, side of the river along a sunken former mill race and were rewarded by many large *Polystichum setiferum*, *Asplenium scolopendrium* and *A. trichomanes* subsp. *quadrivalens*. This led us past artificial caves (no hermit resident!) to explore one of the highlights of the landscape, a bath house referred to as 'The Roman Baths' (52/43907381). As well as adding *Oreopteris limbosperma* to the fern tally, with the help of Simon's pictures we could easily see what a remarkable feature this had been. A large *Dryopteris* was considered a possible *D.* × *critica* and again microscopic examination of the spores by Martin confirmed its hybrid nature.

Returning to Castle Bridge we settled down for lunch before proceeding westwards along the southern side of the river where we almost immediately added *Asplenium adiantum-nigrum* to the fern list. Further along we found an area of a most unusual form of *Pteridium aquilinum* with very markedly crisped pinnules. Passing under several yew trees, believed to have been planted at the time of the park as visual markers to alert you to landscape features of note, we entered an artificial tunnel intended to limit the view and calm the senses before we emerged on a ledge overlooking a beautiful section of the river. After a further section of tunnel and more views we returned to our cars through the woodland and via the open parkland.

This had been an exceptional meeting and we expressed our gratitude to Simon for his time and for making such an effort to interpret the landscape park for us. We had in fact enjoyed such a long visit that plans to go to a second site were abandoned in favour of returning to the Food Centre for tea before journeying home.

The Begwns, Powys – 31 August

Sue Dockerill

It was a fine day, but with rain promised later, when nine local group members met with Hannah Shaw of the Freshwater Habitats Trust at the National Trust car park in The Begwns (52/1619.4421). Although not particularly high, this heathy upland gives fantastic views of the whole of the Black Mountains and the main peaks of the central Brecon Beacons. It is generally managed for livestock and contains many natural and man-made pools most of which contain our quest – pillwort (*Pilularia globulifera*).

Our plan for the day was outlined by Brian. We would explore the ponds in the eastern half of the area, three of which we had visited earlier and knew contained pillwort and one which had a record from the 1970s but we had missed out on previous visits. The idea was that the first three would enable people to hone their pillwort-spotting skills, and then we could survey the remaining pool. With so many experts by then, if it was there we should be sure to find it! Not many other ferns were expected in this area, although bracken (*Pteridium aquilinum*) was much in evidence and was even being harvested on some of the slopes.

Passing on the way one of the few ponds in the area without pillwort, we soon covered the mile or two to the first pillwort site (52/1776.4434), a natural-looking pool with extensive colonies of pillwort covering most of the pool area. Hannah even found some pills, which we had not seen in this pond before. She also showed us a couple of water scorpions – not as scary as the name suggests, but indicative of the health of the pond. On the pteridological front, we also saw single plants of *Dryopteris dilatata* and *Athyrium filix-femina*.

photo: S.C. Dockerill

First pillwort site at The Begwns

Martin Matthews, Sue Norman, Brian Dockerill, Susan Lewis,
Hannah Shaw, Bob Brown, Roger Norman

We then made our way to a very different pool – a deep pond made on a clay base by damming a small spring (52/1748.4401). The edges of this were much poached by animals, so not the prettiest of ponds, but there were scattered pillwort colonies all around the edge and even growing in the deeper water towards the centre. Hannah also told us that it was one of the best wildlife ponds in Wales, having breeding colonies of all native amphibians except natterjack toads.

We decided to go on to the third known pool for lunch (52/164436) when, with impeccable timing, the heavens opened. This meant that after lunch we only gave this enormous pool a cursory glance, although it has some of the largest colonies of pillwort in the Begwns, and made our way to the final pool (52/1613.4342) as the skies cleared. Here we did indeed find more pillwort – mostly around the boggy southern edge – and also our final find, *Equisetum arvense*!

An unusual day for the group was rounded off with some welcome tea and cakes in a nearby garden centre.

YORKSHIRE FERN GROUP

Moonwort monitoring – Grinton to Redmire Road, Yorkshire Dales – 20 May & 4 June

Barry Wright

Continuing with the long running monitoring work on the Grinton to Redmire road (44/039965), we again spent an otherwise pleasant day in May staring fixedly into our one-metre-square quadrats, hoping to see the newly emerged fronds of moonwort (*Botrychium lunaria*). This turned out to be a rather vain hope on this occasion. We almost began to wonder whether or not we had successfully relocated the quadrats as there seemed to be a dramatic drop in the number of fronds that we were recording. The same trend continued throughout most of our quadrats. As this was so anomalous I decided that there was a possibility that we may have been too early this year. We had conducted a seasonal survey set at the outset of the monitoring when we looked at the same quadrats on four occasions during May and early June and found no significant differences in the numbers after the first visit. We always assumed that the first flush of fronds was basically all that were going to be generated during that season and that there was no sequential emergence of fronds during the year.

It was a great relief when I revisited on 4th June to find that this assumption was correct: there were relatively few, and only minor, differences in the numbers recorded on the two dates. This validated the fact that these were real changes and that the losses in 2017 were a true reflection of the 2017 'crop'. The table shows the results compared with 2016.

Table showing the dramatic differences in moonwort numbers between 2016 and 2017
Adder's-tongue (*Ophioglossum vulgatum*) in square brackets

Date	Quadrat no.												Total
	230	231	232	233	236	322	323	324	325	326	267	269	
22 May 2016	35	9	6	17	9	0	6	12	24	16	1 [3]	11 [3]	**146 [6]**
20 May 2017	6	1	0	1	4	0	2	3	11	11	0 [4]	4 [3]	**43 [7]**
4 June 2017	4	1	1	1	3	0	1	8	11	10	0 [3]	3 [2]	**43 [5]**

One bonus of re-visiting was that it became obvious that our best efforts to relocate precisely the quadrats with the metal detector were a little off. Generally the re-surveyed quadrats were about five centimetres out, often east-west, but some north-south or diagonally displaced. Not a big issue, unless you have a situation where things do change seasonally and you need to be able to clearly identify any new plants by knowing for certain which were there initially.

We will continue with the monitoring for as long as I can stand the boredom, which is still more than overcome by having patient and tolerant members to help stick cocktail sticks into the ground once a year to confound the natives and tourists. On a downside I broke my metal detector during the June session and had to pass it over the ground much like cleaning the kitchen floor to find the quadrats. More confused natives "Mum, why is that man trying to clean the grass?"

Askham Bog, near York – 10 June

Bruce Brown

This meeting was a follow up to Prof. Alastair Fitter's talk on the history and ferns of Askham Bog presented at our BPS Spring Meeting in Hull. Alastair has an intimate knowledge of this Yorkshire Wildlife Trust reserve, gleaned over many years of study there, and it was a privilege for us to have him as our guide, showing us the botanical highlights of this richly biodiverse site.

The bog originated when glacial moraines blocked the natural drainage channel, leading to a build-up of peat from decaying sphagnum, eventually forming a raised dome. This was partially destroyed when peat extraction for fuel in the Middle Ages turned the area into an 'industrial site' with canals cut to remove the extracted peat by boats. Recent restoration of

the surrounding fen has allowed the dome to gradually reform, and it is currently around 30 centimetres high, enough to create a pH gradient from seven in the calcareous fen down to three on its acidic woodland summit.

From the car park (44/575481) we started in the fen area seeing *Athyrium filix-femina*, *Dryopteris carthusiana* and occasional *D. dilatata*. *Ophioglossum vulgatum* had been recorded here in the past, but was not seen by us, not least because of the look-alike masses of the basal leaves of marsh valerian (*Valeriana dioica*) covering the ground. The rich flora included marsh orchids, several sedges including the rare tufted-sedge (*Carex elata*) and a big colony of meadow thistle (*Cirsium dissectum*).

Following the boardwalk we passed the first of the large *Osmunda regalis* that grow here. Records show these plants at Askham to be at least 100 years old and Alastair suggests that the largest ones could possibly be around 250-300 years old. A 'baby' one had appeared by a pool dug in 1959, so at least some regeneration has occurred. With permission we collected some spores and are currently growing them up for a possible re-introduction project. This part of Near Wood had been clear felled and kept open since 1973, benefiting bladder sedge (*Carex vesicaria*) and great fen sedge (*Cladium mariscus*) as well as the ferns. We then headed west to reach Far Wood by a footbridge over a wide ditch (44/570480).

photo: A. Fitter

In front of *Osmunda regalis* at Askham Bog near York

Carmen Horner, Bruce Brown, Alison Evans, Yvonne Golding & Roland Ennos

In this oak-birch-hazel woodland *Thelypteris palustris* was doing very well, along with a couple of really special sedges – elongated (*Carex elongata*) and fibrous tussock (*C. appropinquata*). We progressed south-westerly, imperceptibly reaching the summit dome of the raised bog, notable by its acidic vegetation of sphagna, *Molinia* grass, *Dryopteris dilatata*, *D. carthusiana* and somewhat stunted birch trees. The last record for *D. cristata* in 1893 was in this area, thought to have been eliminated by collectors. Sadly, but not unexpectedly, we were unable to re-find it despite a good look round. It would though be worth having another look later in the season. Maybe this could also be considered as a future introduction site for the species?

We returned to the footbridge, but not before paying our respects to the two absolutely huge osmundas with massive rhizomes growing nearby. Here we said our goodbyes to Alastair, who left us to relax over lunch before heading back.

Pillwort survey – Strensall Training Area, north-east of York – 16 July

Barry Wright

The 2017 pillwort survey of the Army's Strensall Training Area (don't call it Strensall Common now or you might get shot – literally) was a continuation of the survey started in 2016, when we were unable to visit all of the candidate ponds. It was obvious that there were a number of other ponds in areas that we were unable to get to that would justify a return visit to survey for pillwort (*Pilularia globulifera*). We hoped the day would start well and made our way to Dolly Pond (44/6413.5987), numbered 'Pond 11' using the Freshwater Habitats Trust numbering system. The 2016 survey did not find a great amount of the fern but it was certainly present and identifiable. Unfortunately, despite diligent searching, it was not evident in 2017. This was disappointing, but emphasises the ephemeral nature of the species.

In order to calibrate ourselves again, we made our way to Pillwort Scrape (44/6501.5942) where we were hopefully guaranteed to find large populations of pillwort. We were not disappointed – there were large and extensive colonies on the shoreline around much of the circumference of the pond, probably as extensive and vigorous as they were in 2016.

From here we made our way southwards towards the firing ranges themselves (the day was thankfully a non-firing day). The Freshwater Habitats Trust did not have any of these ponds numbered in their system, so they were essentially undiscovered country as far as the Trust was concerned. We surveyed five such ponds in this area, all of which proved negative. However, we estimated that three of them had suitable shorelines with an extensive mineral drawdown zone that may justify translocation of specimens during 2018 (see photo of one such pond).

photo: B. Wright

Bruce Brown (*left*) **and Carmen Horner** (*standing*) **trying vainly to find pillwort on the shore of a good candidate pond for the plant**

Pillwort survey – Skipwith Common, Vale of York – 22 July

Barry Wright

An area that we intended to survey in 2016 was the National Nature Reserve of Skipwith Common, north-east of Selby (44/644373). There are historic records of pillwort (*Pilularia globulifera*) for this reserve and the Friends of Skipwith Common were keen for us to help them potentially relocate colonies by conducting a survey. Again, this is an area that the Freshwater Habitats Trust have an interest in and they have identified and given numbers to

a number of ponds. The group began by visiting some of the last historic known locations, in particular a pond (Pond 3) that they call Pillwort Pond. The Friends of Skipwith Common and the Freshwater Habitats Trust have worked together to create some new shallow scrapes in this area, hopefully to extend any colonies still hanging on in Pillwort Pond. Unfortunately Pillwort Pond proved negative in our survey, although parts of the water body were suitable, having a mineral drawdown zone and also there was evidence of cattle poaching, which is a desirable feature to encourage the open nature of the muddy shore that pillwort favours. Many of the new scrapes created were unfortunately dry at the time of our survey and there was no evidence of any colonisation by pillwort.

The survey continued into the depths of the nature reserve, impeded by the tall vegetation that dominates much of the reserve. Where possible we tried to get from pond to pond through areas of wooded vegetation where the ground flora was suppressed by the shade of the trees. Most of the ponds we visited proved to be unsuitable, having a steep sided bank and little or no mineral drawdown zone around the perimeter. Unfortunately it was difficult to circumnavigate many of the ponds because of the tall grassy and reedy vegetation. One pond in particular, Horseshoe Pond, was written off as being unsuitable from what we could see of the shoreline from our access point. However, this pond was actually irregularly shaped and we could not see all of the shoreline to determine its suitability.

As a coda to our survey, one of our members, Michael Wilcox, happened to revisit the area later on in the season with a Bryology group and was able to conclusively relocate pillwort in areas of Horseshoe Pond that we were unable to get to in July. Thus we can now consider the possibility of using the Horseshoe Pond colony as source material for translocation within the site to avoid the undesirability of bringing in material from elsewhere.

photo: M. Wilcox

Pillwort re-discovered by Michael Wilcox at Horseshoe Pond after our field visit

Upper Teesdale, County Durham – 12 August — Barry Wright

Upper Teesdale is one of those places that you have to go to every so often just because it is such a nice area and so rich in ferns. As our group has recently become colonised by a number of new members, 2017 seemed like a good year to go back and have our Upper Teesdale fix. Our first trip I think was written up in the 1998 *Bulletin*. Then we went back in 2002, 2007, 2010 and 2011. We have photos of the party in the 1998 and 2010 *Bulletins*, to compare with the mugshot in this edition. Sadly, at many levels, I am the only one featured in all pictures. Even sadder is the 1998 picture with Betsy Kohler, a lovely lady killed in a boating accident on Windermere a few years later.

After parking at 35/8475.3096, we kept to our traditional route, following the Pennine Way from Langdon Beck up to Cow Green reservoir and the Cauldron Snout waterfall. On this occasion we decided not to do the circular route but to leave some cars at the end of our route in the Cow Green car park and drive back to our start point at Langdon Beck. This proved to be a good move as there is nothing more dismal than walking back down a boring tarmac road when you are tired and looking forward to a nice cup of tea.

The route starts relatively uninterestingly with general horsetails in little gills that cross the track leading up to the Natural England offices. However, we noticed for the first time that there was *Equisetum variegatum* growing on the banks of Harwood Beck (35/8476.3100).

It is fair to say that this visit was virtually an identical re-run of the visit we made in 2010. *E. palustre* was still on the track to Widdybank Farm (35/8429.3024). After this we found real ferns again such as *Dryopteris filix-mas*, *D. dilatata*, *Struthiopteris* (*Blechnum*) *spicant*, *Pteridium aquilinum* and some *Selaginella selaginoides* (35/8322.2862). The area of boulder scree at 35/8318.2857 yielded its usual goodies that we were expecting to see, including *Dryopteris oreades*, *Athyrium filix-femina*, *Huperzia selago*, *Asplenium viride*, *A. trichomanes* subsp. *quadrivalens*, *Polypodium vulgare* and *Cryptogramma crispa*. The *Polystichum lonchitis* site at 35/8231.2813 was still showing healthy specimens. This cliff also had *Cystopteris fragilis* (35/8264.2818) and *Phegopteris connectilis* (35/8161.2845). *Equisetum fluviatile* (35/8180.2832) was ticked off, as was *Asplenium scolopendrium* (seen by someone somewhere). The next plant of interest was *Gymnocarpium dryopteris* in some more boulder scree (not GPS'd). As predicted we found *Dryopteris expansa* nestling behind 'Ken's rock' (35/8180.2832). The *D. carthusiana* found in 2010 was not re-found. We then went to the *Woodsia* site. The *Woodsia ilvensis* colonies seemed to be doing well (location withheld), probably because of the reduced grazing. Scale Bear in the picture is modelling a typical plant of *Woodsia* out of the reach of grazing animals. Then once more we scrambled up the side of Cauldron Snout for the 2017 photo shoot. It must be continental lift as I'm sure it wasn't that steep last time.

photo: B. Wright

Scale Bear with *Woodsia ilvensis*
(she hasn't grown much and is still around ten centimetres sat down)

photo: courtesy B. Wright

Yorkshire Fern Group members at Cauldron Snout, Teesdale
Bruce Brown, Alan Schofield, Michael Wilcox, Carmen Horner, Barry Wright

At the top we broke ranks and some of the less dedicated went off in search of the endemic angiosperm Teesdale sandwort *Minuartia stricta*, leaving me to wander aimlessly in search of possible late moonworts (none were found). There was also some debate about some horsetails that looked like *E. variegatum* in the wild, but morphed into *E. hyemale* when brought into cultivation, or vice versa, but I was too intent on 'moonworting'.

Otley Chevin Forest Park, West Yorkshire – 23 September — Bruce Brown

The Chevin Forest Park, on the north-facing hillside above Otley, was planted from the 1950s with a mix of conifers and broad-leaves, although parts of it around the ravine of Holbeck are doubtless a much older woodland site and here is the best fern area. The underlying rock is acidic gritstone so *Dryopteris dilatata* is ubiquitous, but there are good stands of other *Dryopteris* especially *D. filix-mas* and *D. affinis* and *D. borreri*, which have spawned a few hybrids, so were of particular interest to us. *D.* × *complexa* was confirmed by Ken Trewren back in 2007; more recently Christopher Fraser-Jenkins confirmed *D.* × *critica* for another plant in 2013.

This became a two-part meeting: Alison Evans invited Tony Church from Arran on the 19th September to see what he made of the hybrid plants, and then on the 23rd nine of us met for the official meeting at the Quarry car park (44/212444). *D. filix-mas* and *D. affinis* subsp. *affinis* were immediately to hand, then a few metres along the path heading westwards was a fine plant of *D. affinis* subsp. *paleaceolobata* (with a smaller one close by), confirmed by Tony Church, and the only ones so far known in this area. We followed the road south-eastwards for 200 metres to a large infertile *Dryopteris* at the roadside (fortunately just outside the strimming zone). This was the previously identified *D.* × *complexa* (*D. affinis* × *D. filix-mas*), which we all agreed was still valid, with mainly *D. affinis* and little *D. borreri* in its vicinity.

We made a small tour of the forest paths to take in some other Chevin ferns – *Athyrium filix-femina* and *Pteridium aquilinum* were common, *Polypodium vulgare* grew on a rotting elder log, *Struthiopteris spicant*, *Oreopteris limbosperma* and *Equisetum arvense* were noted by the streamside, with a really huge and splendid *D. affinis* just above. Lunch was by a bridge over Holbeck, resplendent with a mass of *Asplenium scolopendrium*. Both *D. affinis* and *D. borreri* were side by side here, enabling their characters to be compared. Down in the lowest part of the woodland were some miry areas with a good colony of *Equisetum* × *litorale*. We paid our respects to the 'green fuzz' that is *Vandenboschia speciosa* gametophyte, which occurs under a few boulders on the Chevin (but never apparently gets wet enough for sporophytes to grow).

Above the Millstone track near a huge Leylandii was the site for the confirmed *D.* × *critica* (*D. borreri* × *D. filix-mas*) at 44/2130.4444. There was quite a big clump of plants here, some of which were infertile, and others *D. borreri* – it was difficult to separate them morphologically; they need to be checked microscopically for spore sterility. But we did agree that there were sufficient differences, e.g. in indusial characters, to separate *D.* × *critica* from the earlier seen *D.* × *complexa*. The hillside immediately above was a haven for *Dryopteris*, and we climbed up to see several other previously confirmed sterile plants, which we collectively decided were also *D.* × *critica* and with their neighbours around here being mostly *D. borreri* and *D. filix-mas*. In future more plants need to be checked to get a better idea of how many hybrids are on the Chevin, but for now, we were content with progress made, and enjoyed the day finding 16 taxa overall.

Knaresborough, North Yorkshire – 8 October — Barry Wright

This year we sneaked in an extra, short field visit on the day of our AGM. Rather than having a lecture, we went on a jolly to see some *Asplenium trichomanes* subsp. *pachyrachis* (syn. *A. csikii*). It is well known to the group that this fern occurs on the walls of Knaresborough Castle. We made a previous visit to this site in 2001 shortly after they had 'cleaned' some of the weeds from the old masonry. Basically the council had scraped and herbicided it out of existence in many places. In particular there had been strong colonies in a stairwell next to the dungeons; this was completely cleaned.

Part of the reason for the revisit was that my wife Anne and I had made a chance discovery of more of this *Asplenium* in a medieval hermitage on the bank of the river Nidd. St Robert's Cave is easily accessible (not far from the St James Retail Park with a drive-thru McDonald's for the valiant) at 44/3609.5607. The remains of St Robert's Cave and chapel are a rare example of a medieval hermitage, cut out of Magnesian Limestone bedrock, and consists of the Cave, a domestic area and a small chapel that contains the grave and altar platform. On the natural cliff-face there were horizontal crevices in which the fern was growing in several small colonies. This relatively natural setting contrasted with the artificial setting of this species on the medieval masonry of the castle itself.

At the castle we were pleasantly surprised to see that the *Asplenium* was still present and had increased over the years since the earlier cleaning operation.

This was another nostalgic trip as we have a photograph in the 2001 *Bulletin* that we attempted to recreate in 2017. But instead of that one I chose a rather nice picture of five ne'er-do-wells attempting to storm the castle walls, not realising that there was an open gateway not ten metres away.

photo: B. Wright

Examining *Asplenium trichomanes* subsp. *pachyrachis* on the walls of Knaresborough Castle

Brian Byrne, Jesse Tregale, Michael Wilcox, Bruce Brown, Carmen Horner

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THE AMERICAN FERN SOCIETY

The AFS invites all readers of this *Bulletin* to join the American Fern Society. You are welcome to visit the AFS website: amerfernsoc.org. AFS recently revised its membership structure. Amateur members and students pay dues of $20 US, whereas professional botanists are charged $40 and receive the *American Fern Journal*. All members receive the *Fiddlehead Forum* newsletter, published for those who are interested in growing ferns, hunting for them and expanding their knowledge of ferns. Members may choose to receive this newsletter electronically. The *American Fern Journal* is a scientific quarterly that currently is still available as printed issues. There is also the opportunity to exchange spores (for a small extra fee). Membership includes postage for airmail-assisted delivery. For particulars please write to Dr Jordan Metzgar, 926 W. Campus Drive, MC 0406, Derring Hall 2119, Virginia Tech, Blacksburg, VA 24061 USA (ferns@vt.edu). Online credit card payment is available via the AFS website: amerfernsoc.org.

AFS SUBSCRIPTION PAYMENTS: Our societies have an exchange arrangement whereby members of the BPS can pay their AFS subscription through the BPS Membership Secretary and *vice versa*. To take advantage of this, prospective members should contact Dr Alison Evans, Springfield House, Salterforth Road, Earby, Lancs. BB18 6NE (Membership@eBPS.org.uk).

HORTICULTURAL SHOWS & OTHER EVENTS

PLANT SOCIETY SHOW, RHS WISLEY, SURREY – 17-18 June Peter Blake

There has been an annual show for the affiliated 'Plant Societies' at RHS Wisley for several years. Each year the accommodation has improved, and this year we were located in a large marquee on 'Seven Acres' lawn right outside the restaurant. Thus the number of visitors to the show was higher than in previous years, although the very hot weather was a disincentive to anyone doing anything. Despite that, Julian Reed, Pat Acock, Peter Blake, Jude Lawton, Roger Golding, Andrew Leonard, Gill and Bryan Smith and Jo and Ashley Basil provided plants and merchandise and manned the stand over the two days of the show. Other BPS members attended as visitors.

The display was magnificent, with many excellent mature ferns from Julian and Jude and some other 'specials' from Roger, Peter and Ashley. There was a small display of the fern life-cycle, with spores, prothalli and sporelings. An area was provided for the sale of merchandise and of small ferns provided by Julian. *Leptolepia novae-zelandiae* was one of the stars of the show, with many visitors feeling the need to stroke the short, neat, much-divided fronds. Equally, many visitors had the age-old question 'What ferns can I grow in dry shade?' For these we were able to discuss the possibilities and provide the BPS leaflets on ferns for different conditions. We enhanced the interest of one visiting member such that he attended two group meetings in the subsequent week and we also signed up two new members. So, despite the heat (35°C in the marquee), it proved to be a successful weekend show and will be repeated in 2018.

BPS WEEKEND DISPLAY, RHS WISLEY, SURREY – 5-6 August Julian Reed

After the previous year's successful event at Wisley to celebrate 125 years of the BPS, we were invited by the RHS to do a similar event in 2017, and Vanessa Penn of the RHS asked if the Silver-gilt-Medal-winning Plant Heritage stand from Hampton Court Show, representing the National Collections of *Polypodium* and *Athyrium*, could be recreated. This involved starting to set up on the Friday afternoon, and I cannot thank Peter Clare enough for volunteering to help me. The event was very well attended by the public, being held in the gallery of the Glasshouse, which has a good footfall. We had a lot of success interacting with visitors, who enjoyed many good conversations and the opportunity to identify ferns. Plant sales were particularly popular – we almost sold out on the first day of plants kindly provided at a special price by Fibrex Nurseries – and made £229 profit for BPS funds. Merchandise took about £250. We were especially delighted to welcome five new members. It was a 'win, win' situation – good for us, good for Wisley and, most importantly, good for the general public. I am delighted to say that we will be doing it again on 11th and 12th August 2018.

photo: P.J. Clare

Members of the public showing interest in BPS stand at Wisley

The team of volunteers over the weekend were brilliant: Peter Clare, Jude Lawton, Gill and Bryan Smith, Roger Golding, Peter Tindley, Pat Acock, and Yasmin Baksh-Comeau who was visiting from Trinidad. Peter Tindley did brilliant demonstrations of spore-sowing as and when needed. Other Society members led three fern walks through the grounds of Wisley. Plant sales and merchandise were looked after by Gill and Bryan Smith. We would also like to thank Yvette Harvey and Barry Phillips from the Wisley herbarium for their display of herbarium specimens, including ferns, to show how useful the herbarium is. The team at Wisley were brilliant; they were so friendly, did a lot of advertising, and could not have been more helpful, especially with the build up and break down of the stand.

SOUTHPORT FLOWER SHOW – 17-20 August

Michael Hayward

We were very pleased to be awarded a Gold Medal for the Society stand at this year's show. The theme for the show was 'The curious gardener', and our response was to include a small number of 'curious' ferns and lycophytes in our display, including *Psilotum*, *Selaginella* and *Equisetum* species. The erratic weather during the summer meant that many outdoor ferns were well past their best, so we increased the number of greenhouse plants in the display to compensate. In previous years we had been criticised for having insufficient height in our display, so this time we centered the display on a tree fern, *Cyathea incisoserrata.* We are often surprised by which plants attract attention from the visitors. This year *Equisetum hyemale* and *Adiantum raddianum* 'Micropinnulum' received the most comments and enquiries. As always, demonstrations of spore-sowing and propagation were popular. Attendance at this year's show was over 50,000.

photo: M. Hayward

Part of Gold Medal-winning BPS stand at Southport Flower Show

Entries for the competitive classes were slightly increased this year. The judge, Richard Keyes, commented on the high quality of the top two entries for the Championship, which was won by Robert Crawford. The Happiland Trophy was not awarded. This year's winners of the competitive classes were:

Class 5 Individual Championship and BPS cup – four British ferns (dissimilar), two foreign ferns hardy in Great Britain and two greenhouse ferns (dissimilar):
1st Robert Crawford, 2nd Steve Coleman, 3rd Lionel Clarkson (3 entries)

Class 6 One foreign fern hardy in Great Britain:
1st Robert Crawford, 2nd H.J. Abbott, 3rd Alison Evans (4 entries)

Class 7 One British fern; any species or cultivar:
1st Alison Evans, 2nd Lionel Clarkson, 3rd Denise McBride (7 entries)

Class 8 One greenhouse fern:
1st H.J. Abbott, 2nd Michael Hayward, 3rd Alison Evans (4 entries)

Class 9 One *Asplenium scolopendrium*:
1st Alison Evans, 2nd Audrey Smith, 3rd Robert Crawford (3 entries)

Class 10 Three ferns of the same kind (genus); species or cultivars:
1st Robert Crawford, 2nd Alison Evans, 2nd Lionel Clarkson (3 entries)

My grateful thanks are due to all of the volunteers that helped to set up and man the Society stand, particularly to new recruits to the team, Andrew Harrison and Anne Scanes. They joined Steven Coleman, Robert Crawford, Alison Evans, Paul Evans, Alec Greening, Ann Haskins, Ruth and Trevor Piearce and Harvey Shepherd. Yvonne Golding, although not able to attend the show, kindly lent us some interesting plants from her collection.

The dates for the next show are 16th to 19th August 2018.

SECRETARIAL NOTES

Please note: *names and contact details of all officers can be found on the inside of the front cover of this* Bulletin. *Much of the information below is also on our website www.eBPS.org.uk.*

ANNUAL GENERAL MEETING 2018 – The 115th AGM will take place on Saturday 14th April 2018 in the Flett Lecture Theatre, Natural History Museum, London at 2.15 p.m.

SUBSCRIPTIONS 2018 – Subscriptions were due on 1st January and should be paid to the Membership Secretary, Alison Evans. Current rates are given inside the front cover of this issue. Cheques should be made payable to 'The British Pteridological Society'. Payment can also be made by **PayPal** via our website. **Standing Order** forms are available from the Membership Secretary and the BPS website. Standing Orders may be paid on 1st January or 1st February. In either case, membership is deemed to be from 1st January to 31st December. Any member whose subscription is unpaid when due shall be liable to have his/her name removed from the list of active members of the Society.

GIFT AID – As a registered charity, the BPS can claim back from the Inland Revenue 25p for every pound paid in the annual subscription for each member who authorises us to do so. In 2017 we were able to claim £1,413. While this is obviously an extremely valuable addition to the Society's annual income, it could be considerably more if all eligible members authorised it. All that is required is a minimal amount of form filling and a second class stamp. **Even better, the form has only to be filled in once.** There are a small number of provisos:

1. Gift Aid is available only to members who reside in the UK.
2. Members on whose subscription Gift Aid is claimed must be paying income tax or capital gains tax at least equal to the amount claimed.
3. Members whose subscriptions are allowed as an expense in connection with their employment may not claim Gift Aid.

If the Inland Revenue allows us to claim relief on your membership subscription please authorise us to do so.

PUBLICATIONS BY AIRMAIL – Members outside the UK are asked to pay a higher membership fee to cover the extra postage costs of journals. Journals are sent by airmail to all overseas members. Please note that we no longer offer a surface mail option as it is currently more expensive. See inside front cover for rates.

E-MAIL ADDRESSES – These are published in the Membership List 'for members who have a relatively stable e-mail address and who keep up-to-date with their messages'. A supplementary list and amendments are published in the *Bulletin*. To have your e-mail address added, changed or removed, please contact the Membership Secretary by e-mail.

E-MAIL NEWSLETTER – We send quarterly news e-mails to those members who choose to have e-mail communication, to remind them of BPS events and services. The information will be included in our paper mailings to those who do not use e-mail. If you have an e-mail address that you use regularly and you would like to have this service and/or you did not receive our January e-mail, please inform the Membership Secretary.

NOTIFYING CHANGES OF ADDRESS – Please inform the Membership Secretary of changes of address and telephone number. She is responsible for notifying any other officers and appointees who need to know.

CODES OF SAFETY, CONDUCT AND DECLARATION FORM – All members attending Society field meetings should be aware of the Society's *Safety Code* and the *Code of Conduct for the Conservation and Enjoyment of Wild Plants.* Both documents were printed in the 2012 *Bulletin* (Volume 7, Number 5), and are available on the BPS website. For each meeting you attend, you will be required to sign a Participants Declaration form, which the meeting leader will have, whereby you agree to abide by these Codes.

PAYMENT OF EXPENSES – The Treasurer has *Rules for Seeking Reimbursement of Personal Travelling and Administrative Expenses* by Officers and Members acting on behalf of the Society. Forms for claiming these expenses can be obtained from the Treasurer.

COPYRIGHT – All contributors to the BPS journals are required to sign an agreement assigning ownership of copyright of the article, photograph etc. to the BPS. This has the aim of safeguarding the contributors' work from unlawful copying and use. It does not stop contributors from using their own work elsewhere provided that they acknowledge the original source of publication.

GREENFIELD FUND – This fund, set up as a memorial to one of our Society's great fern growers, Percy Greenfield, is used to finance approved projects, helping with the cost of necessary equipment, books and travel expenses. Percy Greenfield's interest leaned very much towards the non-scientific side of our activities and it is felt that he would have wanted this taken into consideration when decisions are made. Workers eligible for university or college grants and similar support are not therefore eligible for help from the fund. Anyone wishing to apply for this funding can find details on our website or contact the General Secretary.

CENTENARY FUND – This fund is used to promote the study of all aspects of pteridophytes – horticultural, scientific and educational, whether by amateurs, students or professional pteridologists. As such its scope is much broader and more flexible than the Greenfield Fund. Anyone wishing to apply for this funding can find details on our website or contact the General Secretary.

THE J.W. DYCE AWARD – This award was set up to honour the memory of Jimmy Dyce who was a member from 1935 until his death in 1996. The eleventh J.W. Dyce award will be made at the AGM 2018 to the author(s) of the best paper, article, book or other substantial piece of work published during 2017 in any of the three BPS journals, on the BPS website or as a Special Publication. The award, which is a cash prize of £100, is open to everyone, whether professional or amateur pteridologist, horticulturalist or fern enthusiast.

PHOTOGRAPHIC COMPETITION – The fifth annual competition is open to all members of the Society who have an interest in photography and wish to share their fern and fern-related images with others. Entries (which must be previously unpublished photographs) will be displayed at the AGM, and winning entries will be decided by members at the AGM. Winning entries will be included in a special feature in the *Pteridologist* following the competition. In addition, and after judging, any or all of the competition entries received may be displayed on the BPS website for general viewing. Some entries will also be used in the annual BPS Fern calendar. Entries must be received by **31st March**. See the Autumn Mailing or our website for details.

MEMBERS' INFORMATION SERVICE – Members often require information and advice on many aspects of pteridophytes but are reluctant to ask or simply do not know where to obtain help. On the website there is an on-line forum, and queries from members on the identification or cultivation of ferns may also be sent to the Horticultural Information Adviser, Matt Busby.

SPECIAL INTEREST GROUP: CULTIVARS – The Cultivar SIG welcomes anyone with a specialist interest in cultivars. They organise field trips, speakers, garden visits and a newletter. For information contact Julian Reed (julianreed@waitrose.com).

BACK NUMBERS OF JOURNALS – If you have any gaps in your collection or are a relatively new member you may be interested in acquiring some back numbers of journals. Currently a bargain pack is available for £7 including postage. See our website for a full list. Contact Pat Acock (BackNumbers@eBPS.org.uk) who holds the stock.

READING CIRCLE – The Society operates a reading circle for the *American Fern Journal*, a quarterly publication containing much information for those seriously interested in ferns. The *Fiddlehead Forum*, which publishes many 'ferny' items of interest to the amateur grower, accompanies it. To receive these journals contact David Hill (Secretary@eBPS.org.uk).

SOCIAL MEDIA – Links to all our social media can be found in the left-hand margin of any page on the website. Social media are overseen by the web-team, who are always looking for assistance; if you can help please contact Bridget Laue.

BPS WEBSITE – The BPS uses its website as a main platform for the flow of information from the BPS to its members and to the general public. The website provides information on the BPS itself and on any fern-related subject. The opportunity to contribute to the forum and even create fern-related blogs is open to members, and also to the general public without needing to join the BPS, although we always encourage new membership. The website should be as interactive as is possible, so that we can facilitate all our traditional activities on-line. Nearly all the activities listed on this page are available on the website. It is an important part of the philosophy of the website that it is inclusive and the BPS invites everyone to view, interact and contribute. Please do have a look at **www.eBPS.org.uk**. Feedback is actively sought, welcome and enjoyed.

PRESERVING OUR FERN HERITAGE – Many BPS members have collections of ferns that they have built up over the years. Some will contain rare plants and cultivars that are no longer easily available. We feel that it is important to preserve these plants and collections where possible. Often, members give clear instructions as to how they want their collection to be dealt with if they are no longer able to care for it themselves, but this is not always the case. Do you or a relative have a fern collection that can no longer be cared for? We have a network of volunteers around the country who can help in various ways, such as advice on how to maintain a collection, what value it may have, how to arrange sale of plants, or re-location to a public garden. Please contact Membership Secretary Alison Evans in the first instance, so that she can pass on your request to a volunteer local to you.

AMERICAN FERN SOCIETY – The AFS has had a reciprocal payment arrangement with the BPS for many years and this is available through their respective Membership Secretaries. See AFS advert on p. 349.

ROYAL HORTICULTURAL SOCIETY – Our Society is affiliated to the RHS. This enables a limited number of members to enjoy certain privileges in connection with RHS Shows, competitions and services. Some RHS Journals are available free to members at indoor meetings. Further information is available from the Treasurer.

MERCHANDISE – The BPS has a lovely range of merchandise including sweatshirts, polo shirts, T-shirts, fleeces and baseball caps; these are all dark green with a small embroidered BPS logo in yellow. Other items, such as BPS ties, metal badges, ferny greetings cards, bookmarks, pens, calendars, mugs, jute bags, fern guides and ladies' scarves, are also for sale. You can see photos of items for sale on our website and order them using PayPal. The organisers Bryan and Gill Smith welcome suggestions for new stock. Merchandise is available to purchase at the AGM.

BOOKSALES – It is difficult to find second-hand fern books at reasonable prices, so if you are thinking of selling any of your books please consider first offering them to the Society. Frank Katzer would also be pleased to receive any donated or bequeathed books that could then be offered to members at affordable prices. Please contact him by e-mail.

PLANT EXCHANGE – This scheme enables UK and EU members to dispose of surplus ferns to the advantage of those who would like to acquire some different species and varieties. Most of the plants offered are young sporelings. The exchange is administered using an on-line system that can be accessed by members from the Plant Exchange page of the BPS website. There, surplus plants can be added to the list and the information necessary to request available ferns can be found. Contact the Plant Exchange Organisers Brian and Sue Dockerill for further details, or to request a current list by post.

SPORE EXCHANGE – The current spore list is published on our website or can be obtained from Spore Exchange Organisers Brian and Sue Dockerill.

NURSERY ADVERTISEMENTS – Members with nurseries that offer ferns are reminded that they may place an advertisement in the *Bulletin*, *Pteridologist* and on the website free of charge in return for the inclusion of a note about the Society in their catalogues/ websites. The Website Editor can include an image if required. If members wish their nursery to be included, in the first instance please contact the General Secretary.

PUBLICITY & MARKETING – We are looking for several individuals who can help with various aspects of publicity and/or marketing. If you have a particular area of interest (shows, meetings, digital content, graphics, photography, writing, illustration or other) and you feel you may be able to help in any capacity, please contact the Secretary.

EDUCATION – The Education Subcommittee would be very pleased to hear your ideas on how we can develop the educational role of the BPS. If you have information about any fern-related educational initiatives or resources that you have found useful please contact the Education Officer.

FERN RECORDS – Members are encouraged to record and submit fern, horsetail, clubmoss and quillwort records whenever possible. Records can be submitted directly to the BPS Recorder, Fred Rumsey, via e-mail or using the BPS recording card, or via the BPS website using the Living Record page. The BPS recording card is available on our website or directly from Fred.

FORTHCOMING EVENTS IN 2018:

The BPS national meetings programme features on the last page of this *Bulletin*.
Please consider helping with or supporting the following public events with BPS stands.

RHS GARDEN WISLEY, PLANT SOCIETY SHOW, 16th-17th June – We will be promoting the appreciation of ferns, fern growing and of course, the benefits of being a member of the BPS. Jude Lawton will be leading our display, but if you would like to be involved in helping, please contact Julian Reed in the first instance.

CULTIVAR WEEKEND, FIBREX NURSERIES, PEBWORTH, 16th-17th June – Julian Reed will be supporting Fibrex Nursery's 60th anniversary weekend by having a BPS display. He would be very pleased to see you there to give your support. There may also be the possibility of a visit to a local fern garden.

RHS GARDEN WISLEY, BPS DISPLAY WEEKEND, 11th-12th August – We will have a fine display of ferns, fern cultivation, fern merchandise and fern sales to promote the BPS and pteridology. Please contact Julian if you would like to help.

SOUTHPORT FLOWER SHOW, 17th-20th August – The BPS will have a stand promoting the Society, demonstrating spore propagation and answering questions from visitors. There will also be a number of fern display categories in which you could win prizes for your ferns. Please contact Michael Hayward (mhaywardL23@blueyonder.co.uk) if you would like to help or enter ferns.

FERN COURSES IN 2018:

FSC KINDROGAN FIELD CENTRE, Perthshire, 15th-18th June – Fern Identification: a residential course at intermediate level. Tutor: Heather McHaffie. To book, contact FSC on 01250-870150 or e-mail enquiries.kd@field-studies-council.org.

FSC KINDROGAN FIELD CENTRE, Perthshire, 6th-9th July – Introduction to Mountain Flowers and Ferns: a residential course at beginner level. Tutor: Theo Loizou. To book, contact FSC on 01250-870150 or e-mail enquiries.kd@field-studies-council.org.

FSC RHYD-Y-CREUAU FIELD CENTRE, Snowdonia, 20th-23rd July – Fern Identification: a residential course at intermediate level. Tutor: Chris Metherell. To book, contact FSC on 01250-870150 or e-mail enquiries.rc@field-studies-council.org.

FSC MILLPORT, Isle of Cumbrae, Scotland, 3rd-5th August – An introduction to ferns: a residential course at beginner level. Tutor: Angus Hannah. To book, contact FSC on 01250-870150 or e-mail enquiries.mil@field-studies-council.org.

FSC BISHOPS WOOD, Worcestershire, 8th August – Introduction to Fern Identification: a day course for beginners. Tutor: John Handley. To book, contact FSC on 01250-870150 or e-mail enquiries.bw@field-studies-council.org.

ANNUAL GENERAL MEETING 2017

MINUTES of the 114th Annual General Meeting of the British Pteridological Society held on Saturday 22nd April 2017 at The University of Hull, Kingston-upon-Hull at 14.00 hrs.

IN THE CHAIR: The President, Dr Fred Rumsey.

PRESENT: Pat Acock, Sean Barton, Audrey Berrie, Peter Blake, Bruce Brown, Matt Busby, Heather Carrington, Steven Coleman, Rob Cooke, Robert Crawford, Brian & Sue Dockerill, John Edgington, Peter Elcock, Roland Ennos, Alison Evans, Mary Gibby, Roger Golding, Yvonne Golding, Vanessa Griffiths, Nick & Eleanor Hards, Andrew Harrison, Ann Haskins, Michael Hayward, David Hill, Jennifer Ide, Frank Katzer, Elise Knox-Thomas, Bridget Laue, Alison Paul, Julian Reed, Martin Rickard, Paul Ripley, Stephen Rogers, Fred Rumsey, Paul Sharp, Pamela Simpson, Bryan & Gill Smith, Robert Sykes, Erica Thomson, Barry Wright.

Item 1 – APOLOGIES FOR ABSENCE: Mike Canaway, Adrian Dyer, Henry Folkard, Peter Freshwater, Jude Lawton, Sylvia Martinelli, Steve & Karen Munyard, Tim Pyner, Ann Robbins, Ann Wright.

The President welcomed everyone to the 114th Annual General Meeting of the BPS.

Item 2 – APPROVAL OF THE MINUTES: Minutes of the 113th Annual General Meeting of the British Pteridological Society held on Saturday 16th April 2016 and published in the *Bulletin* (Vol. 8, No. 3) were approved and signed by the President.

Item 3 – MATTERS ARISING: There were none.

Item 4a – REPORT OF THE GENERAL SECRETARY: This report by Yvonne Golding was published in the *Bulletin* (Vol. 8, No. 3). Yvonne added that since her report had been submitted, the Society had lost two more valued members, Ray Smith and Peter Campion (North-West Group Leader for many years). Retiring as Secretary, she thanked all her BPS friends and hoped the friendships would continue "but without the work".

Item 4b – REPORT OF THE TREASURER: The Society's accounts for 2015 were published in the *Bulletin* (Vol. 8, No. 3). The Treasurer, Peter Blake, thanked Gill Smith for her tremendous help with the reconciliation. We had made a profit, which surprised him, as he had thought that the Chelsea expenses would prevent this. Otherwise, everything was as shown. The Graham Ackers fund had been separated off, as requested at the 2016 AGM.

Item 5 – OFFICERS' REPORTS: The Officers' Reports were published in the *Bulletin* (Vol. 8, No. 3).

Nick Hards, from the floor, asked if Mary Gibby could provide a more detailed résumé of her very good talk the previous year on the history of the BPS in terms of research. Mary said she would be prepared to do this, perhaps for the *Fern Gazette* or *Pteridologist*.

Conservation Officer & Recorder. Fred Rumsey, adding to his report, told members about the find of a second site of *Anogramma leptophylla* on Guernsey made by one of our very young active members, George Garnett.

Item 6 – COMMITTEE APPOINTEES' REPORTS

The Committee Appointees' Reports were published in the *Bulletin* (Vol. 8, No. 3).

Item 7 – ELECTIONS

Vice-Presidents. Matt Busby and Adrian Dyer had served three terms but were standing for re-election for a further three-year term. Following a proposal by Alison Paul, seconded by

Mary Gibby, they were re-elected. Our other Vice-Presidents are Rob Cooke, Roger Golding and Robert Sykes.

Officers. Yvonne Golding wished to stand down as General Secretary and the President thanked her for the fantastic job she had done; everything had run seamlessly and the fact that we were in Hull for the AGM was also testament to Yvonne. Yvonne commented that the post of General Secretary was quite a privileged one; the post holder could make as much or as little of the job as he/she liked. David Hill had agreed to take over as **General Secretary**, subject to election, and this was proposed by Roger Golding and seconded by Bridget Laue, with all in favour. Liz Evans wished to stand down as **Website Co-ordinator** and Bridget Laue had agreed to take over, subject to election. This was proposed by Nick Hards and seconded by Robert Sykes, with all in favour. All other officers were available for re-election en bloc; this was proposed by Rob Cooke, seconded by Julian Reed, with all in favour. [**Committee Secretary**: Ann Haskins, **Treasurer:** Peter Blake, **Membership Secretary:** Alison Evans, **Meetings Secretary**: Bryan Smith, **Conservation Officers**: Heather McHaffie and Fred Rumsey, **Publications Secretary**: Martin Rickard, **Fern Gazette Editor**: Mary Gibby, **Pteridologist Editor:** Alec Greening, **Bulletin Editor**: Alison Paul, **Education Officer**, Gill Smith.]

Elected Committee Members. Ann Robbins and Tim Pyner were standing for re-election. This was proposed by Julian Reed and seconded by Martin Rickard, with all in favour. Mike Canaway was standing for election, proposed by Yvonne Golding. This was seconded by Alison Paul with all in favour. Barry Wright was also standing for election, proposed by Alison Evans. This was seconded by Matt Busby, with all in favour. Nominations were requested from the floor to fill the six remaining vacancies on the committee, and Elise Knox-Thomas volunteered, proposed by Mary Gibby, seconded by Matt Busby, with all in favour. Yvonne asked if Brian and Sue Dockerill would be willing to join the committee and they said they would consider it.

Committee Appointments. There were no changes.

Item 8 – APPOINTMENT OF INDEPENDENT EXAMINERS

Dr Nick Hards was willing to continue as an Independent Examiner, for which the President expressed his gratitude. Mr Alex Storie wished to stand down and Mr Barrie Buels had agreed to take over this role. The President said we needed to record our thanks to Alex as outgoing Examiner and to Barrie for picking up the role.

Item 9 – PROPOSED CHANGES TO THE CONSTITUTION

3.1 The words "a Project Officer" to be removed from the list of Officers.

Fred explained that this post was introduced over a decade ago and in many ways had become unnecessary as many of the proposed roles were now being picked up elsewhere in the Society. It had been decided at the 2016 AGM to discontinue it, but we now needed to remove reference to the post from the Constitution. This was proposed by Julian Reed and seconded by Martin Rickard, with all in favour.

11.1 Instead of "Any member whose subscription is unpaid within six calendar months of it becoming due shall be liable to have his/her name removed from the list of members of the Society", read "Any member whose subscription is unpaid when due shall be liable to have his/her name removed from the list of members of the Society".

Alison Evans explained that we needed to change this wording and were taking out the time factor. This is a practicality to ensure that those who no longer wish to be members do not receive our publications, with the high postal costs ensuing, during the following six months. Audrey Berrie asked for a postal reminder rather than an e-mail reminder and Alison said she did send these. The President reiterated that members would not be

penalised, it was just to avoid the expense of sending publications to those with no intention of renewing. This change was proposed by Robert Sykes and seconded by Julian Reed, with all in favour.

Item 10 – AWARDS & COMPETITION RESULTS

J.W. Dyce Award. This award is voted for by the Publications Subcommittee. Martin Rickard said that once again the results were very tight. The winner receives £100.

Joint 4th: **Andrew Harrison** for his article 'Creating a new stumpery at Sizergh Castle Gardens' in the *Pteridologist*.
John Edgington for his Special Publication *Who found our ferns?*
3rd: **Julian Reed** for his article 'Cultivar country revisited' in the *Pteridologist.*
2nd: **Kevel Lindsay** for his article on Redonda in the *Pteridologis*t.
1st: **John Edgington** for his Special Publication *Fern names and their meanings.*

The Photographic Competition results were announced by Roland Ennos.

Class 1 – Natural ferns – 1st Gill Smith, 2nd Sue Dockerill.
Class 2 – Cultivated ferns – 1st Paul Sharp, 2nd Alison Evans.
Class 3 – Fern theme – 1st Sue Olsen, 2nd Adrian Dyer.
Overall winner – Sue Olsen.

The President said that it was a very good competition. We must try to encourage even more people to take part.

Item 11 – ANY OTHER BUSINESS.

a) Alison Paul proposed a vote of thanks to Regional Group Leaders Bruce Brown (Yorkshire Fern Group) and posthumously to Peter Campion (North-West Group) for their many years of sterling service, and to Robert Sykes and Barry Wright for taking over these roles. Robert Sykes suggested that the President writes to Peter's widow to express this.

b) Bridget Laue made a plea for someone to fill the long vacant Publicity and Marketing Officer post, and suggested that should anyone think of a suitable candidate, the President could sound them out. The vacancy could be advertised again in the next newsletter and on the website.

c) Martin Rickard spoke about the post of Project Officer and proposed a vote of thanks to Anthony Pigott for all his work for the Society in this and many other roles.

d) Pat Acock said that Sue Olsen had received a letter of condolence from someone in the Society after Loyd's death but did not know who it was from. She wanted to thank the writer.

e) Pat Acock commented that we have over a hundred more members than the American Fern Society.

f) Audrey Berrie asked how many members there were in North-East England. The President agreed that there were some very large gaps where it would be lovely if we could have a Regional Group but it can be quite an onerous task to put together a programme.

g) Nick Hards proposed a vote of thanks to Yvonne and Roland for organising the day's events with such a good set of speakers and to Roland for organising the Photographic Competition.

The President, Fred Rumsey, closed the meeting at 2.55 p.m.

Ann Haskins
Committee Secretary

BPS ACCOUNTS FOR 2017

	2016	2017
ORDINARY ACCOUNT		
INCOME		
Subscriptions (*see note 1*)	£19,521.85	20,327.24
Interest	£60.00	-
Booksales *(see notes 3 & 4)*	£2,770.71	£2,690.21
Merchandise (*see note 4*)	£3,508.86	£1,875.65
Inland Revenue Gift Aid	£1,428.82	£1,372.95
Publishers Licensing Society	£196.09	£40.82
Donations	£452.79	£1,704.97
Plant Sales & Spore Exchange	£341.50	£783.50
Prize Money (*see note 9*)	£150.00	£200.00
TOTAL INCOME	**£28,430.62**	**£28,995.34**
EXPENDITURE		
Pteridologist	£4,972.99	£5,385.00
Fern Gazette	£2,367.23	£4,167.92
Bulletin	£5,337.36	£5,908.59
Printing & Stationery	-	£104.53
Administration & Postage	£712.54	£615.10
Subscriptions to Societies	£85.00	£85.00
Plant & Spore Exchanges	£246.39	£153.81
Meetings	£1,120.25	£174.50
Merchandise (*see note 4*)	£3,589.28	£1,123.77
Trustees' Expenses	£352.15	£470.86
Booksales (*see note 4*)	£1,525.48	£1,385.06
Special Awards	£230.50	£190.00
Website	£310.95	£35.77
Autumn Mailing (*see note 6*)	£672.91	£296.20
Promotion & Advertising (*see note 2*)	£907.53	-
Insurance	£61.65	£62.20
Donations/returned overpaid fees	£15.00	£698.76
Chelsea Flower Show	£1,250.00	-
Bank Charges (*see note 7*)	£220.00	£393.95
Solicitor's Fees	£522.00	-
TOTAL EXPENDITURE	**£24,499.21**	**£21,251.02**
Balance (income minus expenditure)	**£3,931.41**	**£7,744.32**
Brought Forward from previous year	£35,256.31	£24,587.72
Transfer to Graham Ackers Fund	-£14,600.00	-
Transfer to Greenfield Fund	-	-£430.00
Transfer to Reserve Fund (*see note 8*)	-	-£20,000.00
Total in Ordinary Account	**£24,587.72**	**£11,902.04**
RESERVE FUND		
Transfer from Ordinary Account (*see note 8*)	-	£20,000.00
Interest	-	£44.15
Total in Reserve Fund	**-**	**£20,044.15**

CENTENARY FUND (Restricted Account)

Interest	£16.84	£12.59
Interest brought forward from previous year	£102.57	£119.41
Total Interest (*see note 5*)	**£119.41**	**£132.00**
Capital brought forward from previous year	£5,583.73	£5,583.73
Total in Centenary Fund	**£5,703.14**	**£5,715.73**

GREENFIELD FUND (Restricted Account)

Interest	£6.21	£4.86
Interest brought forward from previous year	£1,045.06	£1,051.27
Donation	-	£430.00
Total Interest (*see note 5*)	**£1,051.27**	£1,486.13
Capital brought forward from previous year	£1,051.00	£1,051.00
Total in Greenfield Fund	**£2,102.27**	**£2,537.13**

GRAHAM ACKERS FUND (Restricted Account)

Transferred from Ordinary Account	£14,600.00	-
Brought forward from previous year	-	£14,644.43
Interest	£44.43	£32.33
Total in Graham Ackers Fund	**£14,644.43**	**£14,676.76**

PUBLICATIONS ACCOUNT

Brought forward from previous year	£14,609.74	£15,304.02
Income	£1,272.00	£1,576.36
Interest	£43.28	-
Expenditure	£621.00	£1,890.00
Total in Publications Account	**£15,304.02**	**£14,990.38**

SUMMARY

Ordinary Account	£24,587.72	£11,902.04
Reserve Account	-	£20,044.15
Centenary Fund	£5,703.14	£5,715.73
Greenfield Fund	£2,102.27	£2,537.13
Graham Ackers Fund	£14,644.43	£14,676.76
Publications Account	£15,304.02	£14,990.38
Total Funds	**£62,341.58**	**£69,866.19**

REPRESENTED BY

Charitable Organisations Investment Fund (COIF)	£40,280.95	£40,374.88
NatWest Bank & Others	£22,060.63	£29,491.31
Total Funds	**£62,341.58**	**£69,866.19**

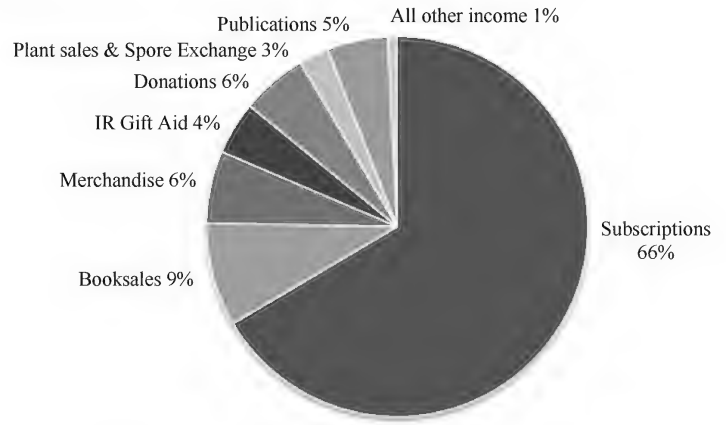
NOTES TO THE ACCOUNTS

1. The accounts reflect the subscriptions actually received in the year.
2. The Society has been promoting and advertising the Society where possible via the RHS, BBC, county and national shows and public display days. Details of these appear in the *Bulletin*.
3. The Society has stock: FSC Key to common ferns – 40 valued at £100.
   What's that Fern? booklet – 800 valued at £1600.
   Back issues of the *Bulletin*, *Fern Gazette* and *Pteridologist* valued at approximately £2,000.
   Merchandising valued at approximately £3,000 & capital of £1,116.39.
   Booksales – new and second-hand books valued at approximately £6,000 & capital of £4,469.06.
   BPS Special Publications valued at £12,500.

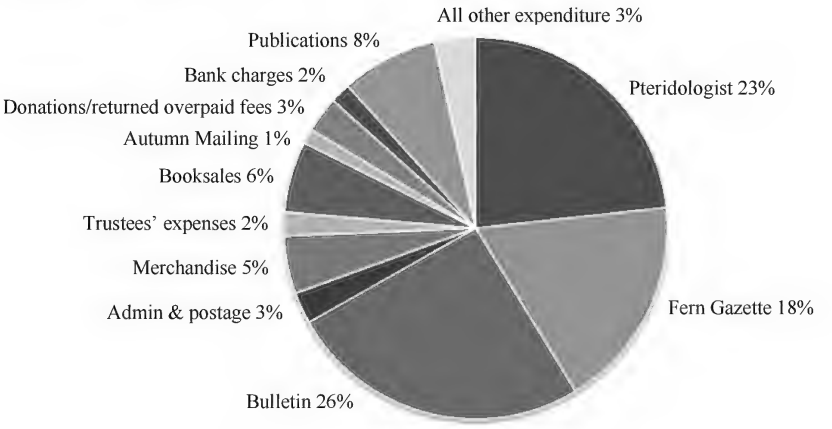
4. Full details of Merchandise and Booksales Accounts can be obtained from the Managers. These accounts are checked annually.
5. The Greenfield and Centenary Funds are split into 'Capital' and 'Interest'. The 'Interest' section of the Funds is available for payment as grants; this interest will be 'topped up' with money from donations, plant sales, etc. from time to time.
6. A large proportion of the Autumn Mailing was sent out to members via e-mail. This saved the Society valuable funds on postage.
7. All payments received via PayPal into the bank are net of charges.
8. £20,000 has been transferred out of the Ordinary Account to create a Reserve Account. Interest will be credited to this account and the three restricted funds.
9. The Society was successful at Southport Flower Show. £200 was awarded in prize money.

Peter Blake, Treasurer

INCOME 2017



EXPENDITURE 2017



ACCOUNTS FOR THE YEAR ENDING 31 DECEMBER 2017

I have examined the accounting records maintained by the Treasurer of the British Pteridological Society. I certify that the Accounts are a true and fair view of the financial position of the Society.

Barrie Buels, Independent Examiner, 13 March 2018

REPORTS OF OFFICERS & COMMITTEE APPOINTEES FOR 2017

OFFICERS' REPORTS

GENERAL SECRETARY – David Hill

The 114th Annual General Meeting on Saturday 22nd April at the University of Hull was part of a packed weekend (reported separately) and was, rightly, one of the highlights of a very busy 2017 calendar. At the AGM we welcomed Elise Knox-Thomas, Barry Wright and Mike Canaway to the committee, and this was the point at which I took over from the inimitable Yvonne Golding as General Secretary. The AGM saw an impressive array of photographs, posters, speakers, ferns and merchandise, as well as a chance to catch up with old friends and new. The tenth J.W. Dyce award went to John Edgington for his Special Publication *Fern names and their meanings*. The award in this case went to an impressive publication, but it is open to anyone who writes an interesting and informative article for any of our publications; there is also a cash prize for our photographic competition, so it is well worth submitting material for both.

The stunning cover of the *Pteridologist* featuring an *Asplenium scolopendrium* gametophyte by Jennifer Deegan continues to take my breath away, and illustrates the power of new images in showing the world of pteridophytes to others.

All of the publications, leaflets, posters, exhibition stands and website posts produced throughout the year by the Society continued to be of an amazing quality. This is in no small part due to the work of the editors, committee and subcommittee members, authors, contributors and volunteers in all of their variety, and one of the joys of this post is exposure to the range of roles, time and commitment delivered by this diverse group. If you have any skills or energy that you feel could be of benefit to the Society please don't hide your light under a fern, I'm sure you will find working with this group of professionals as rewarding as I do.

2017 saw membership continue to grow, primarily due to Alison Evans' efficiency; keeping pace with this were all of the other services provided, and their organisers are to be congratulated. The free Plant and Spore Exchanges are now on-line and have handled an impressive number of packets (and spores). Our current subscription is still extremely good value despite high printing and postage costs, and low interest rates. Booksales and Merchandise take time and energy, but bring in much-needed revenue, and we benefit tremendously when members donate books or sell their collections to the BPS. Purchasing our merchandise keeps us looking the part at shows and events and on Society excursions, which further helps to raise our profile.

An enquiry from a BBC researcher in June saw Andrew Leonard's incredible garden and allotment being featured on BBC Gardeners' World in September. If you missed the episode I can highly recommend it [available on YouTube via a link on our News webpage]. This coincided with the Gardeners' Question Time 70th Anniversary Party at Ness Botanic Gardens, and both high profile events gave us good exposure to a wider public.

In terms of our 'virtual Society', Andrew Leonard's mastery of the world of WordPress continued to help the site to flourish. When I get the chance, tweets and Facebook posts on #FernFriday now have a rapid and wide impact. Although difficult to measure such things, their international reach at the touch of a button is impressive. Twitter also helped with finding out about a new Killarney fern site in Ireland, and revealed a new and impressive 22-foot-girth *Osmunda regalis* specimen on a private property in South Wales. Facebook brought an enquiry about the greatest number of fern species in a genus, and in August headline news about the mystery die-off of sword ferns in the USA.

As this *Bulletin* is testament to, the Society held an impressive range of meetings, events, talks, excursions and fern recording. On a purely personal level, the highlight of the year

was the July visit to Kindrogan, ticking *Spinulum* (*Lycopodium*) *annotinum* off my life list, and a very long trek was rewarded with *Athyrium distentifolium*, *Woodsia alpina*, and my new favourite fern *Cystopteris montana*.

Publication of the IUCN *European Red List of Lycopods and Ferns* makes sobering reading, and highlights how much more we need to do to continue to raise the profile of this important and often overlooked group of plants. Along with this report the Society helped support, advise and fund the new BSBI Code of Conduct, and the *Threatened Plants of Britain and Ireland* publication, and funded the re-planting of ferns at Jodrell Arboretum. We are also starting projects to monitor *Polystichum lonchitis* sites in England and Wales and continuing to re-visit historic pillwort sites.

The January and May committee meetings were held at the Natural History Museum in London, and in October we met at the 15th-century flint watergate of Pulls Ferry on the River Yare in Norwich. As always, thank you to all those involved in arranging and hosting these productive and enjoyable days. We were pleased that Brian and Sue Dockerill agreed to be co-opted to the committee. However, during the year we lost Ann Robbins and Lizzie Evans, and I would like to thank them for all of their work and wish them well with their new ventures.

There have been several changes of Regional Group Organisers for 2018. After over thirty years at the helm of the South-East Group Paul Ripley and Pat Acock handed over to Julian Reed and Peter Clare. Barry Wright took back leadership of the Yorkshire Fern Group from Bruce Brown, and Peter Blake is currently looking after the East Anglia Group. Many thanks to all of them.

So far, one of the few jobs I do not relish is reporting on deaths within the Society, and this year, as the obituaries testify, we have lost many great characters. Very recently Tim Pyner passed away; a lovely personal recollection was written by Andrew Leonard for the website, and by Yvonne for the *Bulletin*. His knowledge will be missed both on the committee and in field meetings, and our thoughts are with Beverley at this difficult time. Sadly, others have also passed, including Ray Smith, Jack Schieber and his wife, Peter Campion, David Walkinshaw, past President Gwladys Tonge and John Lovis.

Looking forward, 2018 sees the introduction of the new General Data Protection Regulations, which impacts charities just as much as businesses; the key difference is our limited resources to address the issues that arise. As you will have found in this issue, there is a slip that we need you to complete, either on-line or by post, in order for us to comply with the new regulations. If you have any problems, questions or issues please contact me directly and I will endeavour to help.

I am extremely grateful to Yvonne for having the faith in me to take over a role she excelled at, and a big thank you to Alison Paul and Ann Haskins for prods and reminders at the appropriate times; however, any errors or omissions are definitely mine. As I start to try to find the reins, hopefully I can try and emulate some of Yvonne's efficiency and enthusiasm for this wonderful role, and look forward to reporting on some exciting developments and events that are already in the pipeline for 2018.

MEMBERSHIP SECRETARY – Alison Evans

We had 109 new members joining in 2017, 80 of them for the 2017 subscription year, and 29 who joined late in the year to start their membership in 2018. Sixty-eight of the new members joined via the website, using PayPal, and 262 people in total used this method of payment. Fifteen people who had previously been members re-joined the Society in 2017. Sadly, four members died. We had 20 resignations during the year, and 17 members lapsed as they did not pay their subscriptions after two reminders. These figures represent an improved retention rate of members compared with the previous year, when we had 23 resignations, and 61 members lapsed.

As of 6th January 2018, we had 753 active members plus 66 family members. This was made up as follows:

Full members	539
Optional members	116
Complimentary members	12
Honorary members	7
Students	26
Subscribers	53

There were some problems with the American Fern Society (AFS) website at the start of the year, leading to some payments not being recorded initially, but finally it seems that 65 members chose to pay through the AFS, and seven members of the BPS paid their AFS fees via the BPS.

In the past year we sent out quarterly news e-mails to those members who choose to have e-mail communication, to remind them of BPS events and services that are detailed on our website. If you have acquired an e-mail address that you use regularly, and you would like to sign up for this service, please let me know on membership@ebps.org.uk

In May 2018, new General Data Protection Regulations will come into force. We will need to have your explicit consent to contact you by telephone or by e-mail. This requirement is reflected in our new 'Renew your subscription' form on our website. Please see the form enclosed with this *Bulletin* that explains the new regulations and how the Society is going to comply with them. Please let us know your preferences for how we contact you – if we don't have your permission, we will not be able to contact you!

MEETINGS SECRETARY – Bryan Smith

The Meetings Subcommittee met in March to review progress on the 2017 programme and to plan for 2018. Thereafter, as in previous years, most of our communication was conducted by e-mail. We were pleased to recruit Bruce Brown to the subcommittee.

During the year we considered several new issues. (1) The effects of the Nagoya Protocol on field meetings: a form of words, similar to that used for the Spore Exchange, is being drafted for inclusion in several of our documents. (2) Risk assessments: our insurers felt that we should have these for field meetings, and something similar to that used by the British Mycological Society for fungus forays is being adapted for our use. (3) Expenses for organising meetings: we felt that these needed to be agreed with the Treasurer beforehand.

Once again, we planned a busy and exciting programme for 2017. The first of our field meetings was to the Azores in early May (organised by Tim Pyner and Andrew Leonard). Next we visited Northern Ireland (organised by Hazel and Chris Metherell) in July. Also in July, there was a cultivar weekend at Sizergh and South Cumbria (organised by Julian Reed) and a Scottish trip based at Kindrogan (organised by Heather McHaffie). We finished off with a weekend in September near Tavistock in Devon (organised by Andy Byfield and Ian Bennallick).

We began our indoor programme with the AGM at Hull University in April (organised by Yvonne Golding and Roland Ennos) with talks themed around ferns and fossil ferns in Yorkshire, followed by a Sunday exploration of Hull's wall ferns. In June, we again had a stand at the Plant Society weekend at RHS Wisley (organised by Peter Blake) and in July we took over part of the Wisley glasshouse for a repeat of last year's weekend BPS 125th Anniversary fern display (organised by Julian Reed). In August, we had our annual stand at Southport Flower Show (organised by Michael Hayward) where we won a Gold Medal. The finale to our year was the Autumn Indoor Meeting at Cambridge University Botanic Garden in November (organised by Tim Pyner and Peter Blake) with talks by BPS members on the theme 'Ferns on islands'. Reports on all of these meetings can be found elsewhere in this *Bulletin*.

Details of meetings planned for 2018 were circulated with the Autumn Mailing and are available on the website. It includes trips to Holland and Belgium (July), Leicestershire (July) and Wensleydale (September). Indoor meetings include the AGM and Spring Meeting at the NHM, London (April) with several talks on 'Garden design with ferns' and the Autumn Meeting at World Museum Liverpool (November) with talks about '*Dryopteris* – UK and foreign'. There will also be three shows – the Plant Society Show weekend at Wisley (June), a

BPS fern display weekend at Wisley (August) and Southport Flower Show (August), and we will have a BPS display at Fibrex Nurseries' 60th Anniversary Weekend (June).

As always, the success of meetings is dependent on the leaders, who voluntarily give up their time and effort. This is no mean feat, but the rewards are well worth it. If you fancy organising a meeting, please do let one of us know. You won't be going it alone, as we always allocate a subcommittee member as a liaison point for each meeting. Please also let us know if there are any places you would like to visit and study ferns.

Finally, I would endorse the fine work that Regional Meetings Organisers do in arranging trips 'on your doorstep'. Even if you are visiting an area on holiday, it is worth checking the BPS website or contacting the Regional Organiser to see if there is a meeting you can join.

CONSERVATION OFFICER – Fred Rumsey

The IUCN *European Red List of Lycopods and Ferns* mentioned in my report last year was duly published (García Criado *et al.*, 2017). Quibbles about the taxonomy used and the scope thus achieved aside, this important document can be seen as an excellent starting point for European fern conservation and has done much to raise the profile of pteridophytes more generally. It is interesting that when considered at this broader geographic level all of our British & Irish ferns are considered LC – Least Concern, with the exception of *Lycopodium issleri* (*Diphasiastrum* × *issleri*) which is NT – Near Threatened. The greatest concentration of threatened species is in Macaronesia, and through its excursions to this region the Society has played a useful role in raising our understanding of the distribution and abundance of these species.

In the light of the status of *Diphasiastrum* × *issleri* and long term concerns over the identity of some British populations, not least the only extant English examples in Northumberland, I put forward a proposal to Natural England for some re-survey work on this species. Word is that budgets are particularly tight this year and so I have little expectation of receiving funding. It is, however, hoped that support will be ongoing for the work being carried out on *Dryopteris cristata*. Due to the kindness of Angela Tandy at Fibrex Nurseries we are currently in the process of raising plants to use for *ex situ* conservation, experimentation and possible translocation.

RECORDING OFFICER – Fred Rumsey

My thanks once again to all who have alerted me to finds, or have sent me and their local BSBI recorders their records. I know that these are particularly welcome as we approach the final push towards Atlas 2020. With just two field seasons to go there still remains a lot to do!

My list of species, native and naturalised, continues to evolve, reflecting the taxonomic changes suggested by such important works as the Pteridophyte Phylogeny Group publication (see my comments in *Pteridologist* 6:322) but also through additions with novel escapes from cultivation. It is my intention to publish this list, annotated as a census catalogue giving distributions at the vice-county level, which hopefully will stimulate recording. With the appearance of novel species in our flora there tends to be a distinct time lag between taxa entering cultivation (or indeed entering the country through other means) and them taking off into the wider countryside. The latest garden subject to make an appearance, although transient, on a London wall was *Athyrium otophorum*, found by Stephen Lemmon. It is interesting that away from urban walls there are so few naturalised alien ferns.

Fieldwork continued on the *Pilularia* survey, working with the Freshwater Habitats Trust, and in some areas we have now re-visited all known and likely habitats. I hope that by 2020 we can say this country-wide. The Society's recording project on moonwort and adder's-tongue on the North York Moors, conceived and led by Barry Wright, is approaching its twentieth birthday and with each passing year becomes an even more valuable record of these enigmatic plants' performance and behaviour. The North-West group, with Mike Canaway leading, are also now intending to do a detailed survey of the English populations of *Polystichum lonchitis*. While considered Vulnerable at the GB level, this attractive species is regarded as Endangered at the English level, and in the England Red List (Stroh *et al.*, 2014) it was suggested that the total English population may only be c. 250 plants in 14 sites but that re-survey was needed.

Work has continued on producing better guidance on the scaly male ferns (*Dryopteris affinis* agg.) so that we can make more, and more detailed, records. The second edition of the late Ken Trewren's illustrated guide is in production; we are currently waiting in the hope of receiving molecular data from a parallel study that will inform this. Workshops have been run in conjunction with the BSBI, and if there is demand within the Society further themed field meetings and workshops can be delivered.

PUBLICATIONS SECRETARY – Martin Rickard

The situation with our three excellent journals has changed little since last year. All the principal staff are the same and the same praise applies. One change with the *Pteridologist* is that editorial help is being given to Alec Greening by Chris Evans. Don't forget to keep sending copy to Alec.

Special Publications keep coming. The second edition of *Polystichum cultivars* appeared in the autumn. It seems to have been received well. It is exactly the same as the first edition, which sold out, apart from the addition of 50 high quality colour photographs of some of the more interesting cultivars. It sells at £15, the same price as the first edition. Work is also well underway on a revised edition of *Some taxa within the* Dryopteris affinis *complex.* Possibly more exciting, because it is completely new, is the book on *Ferns albums* that Michael Hayward is putting together. This will be the first serious attempt to describe a very full range of the fern albums that have been produced around the world – mainly in the UK and former British colonies. We are expecting it to run to about 200 pages with well over 100 albums described and illustrated.

Further down the line is a monograph of the genus *Polypodium* with the provisional title of *Variation in* Polypodium *and a brief review of all species worldwide.* It is potentially nearly complete but it will take some time to get it fit for publication and I doubt it will appear in 2018. Probably even further off, the Society is also looking at a new British fern flora. This is currently being steered by Fred Rumsey.

Last autumn a new Society publication appeared, a free on-line Newsletter for the Cultivar Group put together by Mark Border. So far we have had two issues, October 2017 and January 2018. To have your name added to the circulation list e-mail Mark on markgborder@btinternet.com.

***FERN GAZETTE* EDITOR-IN-CHIEF – Mary Gibby**

Two parts of the *Fern Gazette* were published during the year, in May and November. Both parts included a review article, in June an article on rheophytic ferns by Professor Kato from the University of Tokyo, Japan, and the second in November by Professor Gensel from Chapel Hill, North Carolina, USA on fossil ferns. The *Fern Gazette* team is already benefiting from the addition of Klaus Mehltreter, who joined Adrian Dyer and Bridget Laue as a commissioning editor for review articles. Klaus is at the Institute of Ecology, INECOL, in Veracruz, Mexico, and brings his extensive expertise in fern ecology to the team, and commissioned Professor Kato's article. The subjects covered in research articles this year included hybrids of *Equisetum* in Norway, a new record of *Serpocaulon obscurinervium* from Colombia, monitoring *Polystichum lonchitis* in the Netherlands, brown rot disease on *Azolla microphylla* and new discoveries in *Cystopteris fragilis sensu lato* in the UK.

I am very grateful for the support of the review commissioners and the other members of the editorial board for support with the *Fern Gazette*, and for all who have given their time to review articles. Enormous thanks go to Andrew Leonard for his excellent work in preparing the *Gazette* for publication, and ensuring that this is publicised (and made available) through the BPS website.

***PTERIDOLOGIST* EDITOR – Alec Greening**

The 2017 *Pteridologist* was published by the end of June, slightly bigger than last year at 88 pages plus cover. Chris Evans joined me as co-editor, which made my work load a lot

easier. Many thanks Chris. This issue contained a reprint of the *Azolla* article with all the co-authors correctly placed in the header. Yet again there was a good mixture of articles ranging from hybrids, cultivars and natives to foreign ferns in exotic locations such as Taiwan, Tasmania and Malaysia. The *Tree fern newsletter* was missing because Mark Longley had work commitments but he promises that it will be in the next issue. Many thanks to my proof readers: Roger Amos, Brian Ottway and Adrian Dyer.

The 2018 issue already looks very promising. If you have an article that you would like published please contact me as soon as possible and I will do my best to include it.

***BULLETIN* EDITOR – Alison Paul**

The 2017 *Bulletin* is again 100 pages. I was expecting it to be shorter, as the Cornwall and Wessex Regional Groups held no meetings, and a few other Groups had a reduced programme. Sadly, however, there were eight obituaries to accommodate.

Huge thanks are due to to Peter Elcock who beavered away compiling the index to volumes 6 and 7 of the *Bulletin*. He has done an excellent job, and prepared it well in time for distribution with this issue.

WEBSITE CO-ORDINATOR – Bridget Laue

In 2017 the BPS website went from strength to strength, largely due to the ingenuity and hard work of Andrew Leonard. As before we were hosted by TSO, which provides us with a platform free of charge. The design and the management of the site were provided by a volunteer webteam, including Liz Evans, Roger Golding and David Hill in addition to Andrew. Thus, the Society continued to benefit from this service at no financial cost. Sadly, the website is constantly under threat from hackers but, ever vigilant, Andrew has so far been able to block these attacks quickly and add appropriate security measures.

The website (www.ebps.org.uk) continued to provide a vital service to members of the Society as well as being our window to the general public. In 2017 there were nearly 24,000 visits to the website, from more than 15,000 different people; a little over a third of these were new visitors to the site. The most often viewed pages were: Ferns, Growing ferns, Fern nurseries, Spore exchange, News, Archive, BPS publications, the *Fern Gazette*, Merchandise, Cultivation of ferns, the Forum, and Membership. There was more interest during the summer months and, not surprisingly, there was a burst of visits in late September following the special item on *Gardeners' World* about ferns, featuring Andrew and his garden. We also had 48 website enquiries, with people asking for information about membership or merchandise, or seeking general advice. When an enquiry is posted the webteam are immediately alerted and we try to refer it to someone who can best answer the question.

The PayPal system has been working well: a total of £6,505 was paid through the website, including £5,680 for subscriptions, £330 for 36 orders of merchandise and £390 for Special Publications. About 80% of the orders for the Spore Exchange came via the on-line web ordering system. We explored the possibility of posting advertising from fern-related businesses, but at this time there does not seem to be enough demand to make it worthwhile.

We would like to thank the following people for maintaining particular pages on the website: Brian and Sue Dockerill – Spore Exchange and Plant Exchange; Bryan Smith – Merchandise; Bridget Laue – New Research; Tim Pyner and Andrew Leonard – What's that Fern?; Alison Evans – Membership and Where to see Ferns; Roger Golding – Ferns.

As well as the website, we had additional exposure on social media provided by Ashley Basil (Flickr) and Alison and Liz Evans (Facebook and Twitter).

We are very keen that the website should be up-to-date with BPS news and events, and we want to keep it full of attractive items that will be of interest both to members and to casual visitors. As always, we encourage all of you to contribute to the content – this is your website! We look forward to hearing your suggestions and would welcome any feedback.

EDUCATION OFFICER – Gill Smith

In 2017, members of the Education Subcommittee were involved in RHS Wisley plant shows, Southport Flower Show, Plant Heritage shows and National Trust guided walks.

The RHS Wisley Plant Society Show in June was very successful. New members were signed up and plants and Merchandise were sold. The display set up by reasonably local members was superb and attracted a lot of public interest.

At the RHS Hampton Court Flower Show in July, Julian Reed and Peter Clare won a Silver-Gilt Medal for their display of cultivars of *Aplenium scolopendrium* and *Athyrium filix-femina* as part of the Plant Heritage Exhibition of National Collections. Other members provided plants for show and for sale at local level Plant Heritage shows, e.g. three East Anglia Group members had a stand at the Plant Heritage Hethersett show near Norwich, selling a lot of plants and also recruiting two new members.

RHS Wisley had offered us another 'fern specific' weekend in August, and a great display of ferns by members of the South-East and East Anglia Groups was accommodated in the Glasshouse. We were amazed to discover that people were queueing up to get to the fern plant sales first thing on the Saturday morning – we were very grateful that plants were provided for us at cost price by Angela Tandy of Fibrex Nurseries. New members were signed up, money was raised for the BPS from the plant sales and a good selection of Merchandise was sold.

At Southport Flower Show Michael Hayward and Society members won a Gold Medal for an excellent display of ferns. They also raised money through sales of Merchandise and Special Publications, and more new members were recruited.

Scottish members again had a stand at the Botanical Society of Britain and Ireland and Botanical Society of Scotland joint AGM in November at RBGE. There were 38 exhibits so a lot of competition but the BPS stand seemed to get plenty of attention. The day included Mini ID sessions including two on ferns given by Heather McHaffie that were attended by no fewer than 42 people. Meanwhile Mary Gibby conducted a session in the herbarium on the subtle differences between *Dryopteris expansa* and *D. dilatata*, again with around 40 attendees.

Other fern workshops were run by Alison Evans at World Museum Liverpool, David Hill in Bangor and by Mark Duffell. These types of events often pass unrecorded, so if you are involved in any similar events or talks that promote ferns and the Society, please let me know so that they can be recorded against our Educational charitable aims.

'Gardens to Visit' was revised by Alison Evans and is on the BPS website under 'Where to see Ferns'. 'Research Alert' on the website continued to be managed by Bridget Laue, providing easy and free access for members to many fern-oriented research papers.

The Victorian Fernery at Southport is in need of some replanting to improve its fern collection, and also of interpretation materials. Volunteers from the Southport Botanic Gardens Community Association are preparing to take over responsibility for the maintenance of the fernery. Training days for the volunteers are planned, which will include hands-on gardening. Members of the Education Subcommittee have been to investigate ways in which the Society can assist in this project; this help will be progressed through the main Committee.

Ascog Fernery on the Isle of Bute has been giving out our promotional leaflets and have suggested that we run some courses there in the future. As the glossy leaflets proved very popular at the various venues, it was decided to produce an extra one on 'Growing ferns indoors' as well as updating and printing the rest in the same style. We are also hoping to revamp all the posters so that new sets will be available for members to use in 2018.

Finally, three of our members resigned last year, leaving the team rather short-handed. David Hill and Chris Nicholson have kindly stepped up to help us. If any other BPS members would like to join our friendly group, please contact me via e-mail; we only meet up once a year. I would like to thank wholeheartedly the Education Team for their wonderful support throughout the year.

COMMITTEE APPOINTEES' REPORTS

SPORE EXCHANGE ORGANISERS – Brian & Sue Dockerill

These statistics give an overview of the main Spore Exchange for 2017.

	2013	2014	2015	2016	2017
No. taxa in list	374	441	503	459	452
No. orders received	99	115	98	96	135
No. packets supplied	1,548	2,015	1,703	1,568	2,331
No. first choices supplied (%)	1,276 (82%)	1,795 (89%)	1,526 (90%)	1,400 (90%)	2,024 (86%)
No. donors	35	31	32	32	39

They show that overall the Exchange is healthy, with most statistics fairly stable or improving. Both the number of donors and number of orders was high in 2017. We again supplied spores to the Seed Exchange of The Hardy Plant Society.

We included wording on the website, spore list and insert sheet sent out with orders to cover the implications of the Nagoya Protocol on the usage of any spores. We also contacted all active donors to draw their attention to the need to ensure that all spores were collected legally and included this in the donor notes and general information about spores on the website and in the spore list.

We continued to supply short viability spores separately, and the statistics for this are shown below. These include packets of *Leptopteris* spores kindly supplied directly to recipients by Michael Hayward.

	2016	2017
No. taxa donated	9	11
No. donors	4	6
No. packets supplied	40	30

As always, we are very grateful to the spore donors, without whom there would be no Exchange. If anyone is interested in becoming a donor, we are very happy to offer advice or they can look on the website for help.

PLANT EXCHANGE ORGANISERS – Brian & Sue Dockerill

The following gives some statistics for the current web-based scheme, with the related figures for the previous paper system in 2015.

	2015	2016	2017
No. taxa available	77	32	22
No. donors	8	6	5
No. taxa wanted	n/a	19	25
No. requestors	9	5	8

From this it can be seen that, although members used the web system fairly well for posting wants, there was less usage of it for offering ferns. Both were advertised in the autumn and spring mailings and also with all spores sent out from the Exchange. We also offered to send out a paper list on request, and one person took advantage of this.

BOOKSALES ORGANISER – Frank Katzer

2017 was a successful year for BPS Booksales, and stock levels increased significantly despite good sales throughout the year. I would like to thank Alan Ogden for donating his fern book collection to the BPS, Ted Munyard for donating some fern books and also David Bannister and Robert Sykes for selling some fern books to the BPS. Vivien and Angela Green bequeathed their fern book collection to the Society. Booksales also purchased some new books, including the *Ferns and fern allies of Taiwan* series by Ralf Knapp. Booksales made a surplus of £1,305 for 2017 and I was able to transfer £2,000 from the Booksales account to the main BPS bank account.

I would like to thank Yvonne Golding for her help during the year. Yvonne took fern books for me to several meetings in England, making them available to many more BPS members than I have contact with.

As always, BPS Booksales welcomes donations and bequests of books or offers to purchase either individual books or whole book collections. Please keep in mind that the prices offered cannot be internet prices but if you sell books to dealers, they will not offer you sales prices either. To contact me please use my work e-mail: Frank.Katzer@moredun.ac.uk or alternatively the Booksales e-mail: Booksales@eBPS.org.uk. I can also be contacted by post: Frank Katzer, Highfield House, Muirburn, Skirling ML12 6HL, Scotland or by phone: 0044 (0)1899 860 307.

BACK NUMBERS OF JOURNALS ORGANISER & SPECIAL PUBLICATIONS SALES – Pat Acock

Sales of back numbers of our journals were still very slack despite all their wonderful articles packed with fern interest. After 2016's report and appeal sales were not notably up. If you would like any back numbers, there is a price list on the website, but do get in touch as I can always do a deal for members, and I am still offering a bargain pack for £7 including postage. It grieves me to take our journals for recycling after all the hard work that has gone into producing them as well as the tender loving care given during their storage.

It was good to have a new Special Publication to sell in 2017 – the second edition of *Polystichum cultivars*, enlivened by colour plates. I wonder how many people saw the flyer in the last Autumn Mailing; sales never picked up with only about eight being sold in the ensuing couple of months. However, by word of mouth and at meetings we managed to sell a further 35 to 40. Overall, sales-wise it was a good year with revenue of around £1,300, though probably a quarter of this was postage.

It is good news that there are a few more Special Publications in preparation. However, this will require me to cull a few more journals to make space for them since we are at the limit of storage capacity at my home unless we build another extension. Please try to buy a few; we cannot afford to cull the Special Publications as we only turn a small profit on publication costs once they are all sold, which may require storage for 30 years. Our top client is a botanical bookshop that sells them for about £10 more than we do. They do make excellent gifts, so I hope to hear from you soon.

MERCHANDISE ORGANISERS – Bryan & Gill Smith

We had another successful year in 2017, and though not as good as in the 125th Anniversary year, there was good interest in items. Overall, sales were less in 2017 (nearly £1,800) compared with 2016 (nearly £2,500). There were a similar number of mail orders – nearly forty, and the trend continued that most of the mail orders came through the BPS website. There were overseas orders from Australia, Switzerland and Germany, and six orders from the USA.

We produced the 2018 BPS calendar early in the year to try and improve on sales, and it was ready for the AGM. This paid off and there were even more selling opportunities throughout the year. The calendar contained some stunning images from the Photographic Competition held at the 2016 AGM and proved popular. Fortunately, following the closure of our local calendar manufacturer in 2016, we managed to find another local supplier who maintained the standard of the previous calendars. Hopefully, the 2019 calendar should be available in time for the 2018 AGM and contain more stunning images, this time from the Photographic Competition at the 2017 AGM.

The lovely fern scarf designed by Susan Brooke continued to be popular, and when Susan introduced a ferny apron that we added to our range, it also proved popular. We had to restock on BPS sweatshirts and we sold the last of the Great Yarmouth Pottery mugs featuring a *Blechnum penna-marina* by Anne Wright. This was one of the first new items we introduced when we took over merchandising in 2001. These limited edition mugs are bound to become very collectable, so if you have one, hang on to it!

As in previous years, the Spring AGM and Autumn Indoor Meetings were good for face-to-face sales. These opportunities saved members postage and packing costs, as did the local regional meetings and national meetings that we attended. Colleagues in the north sold merchandise at the AGM of the North-West Regional Group, and where possible, merchandise was sold to the public at the various shows the BPS attended, including Wisley, Southport, Ness Gardens (see North Wales Group report) and Hethersett (see Education Officer report). Further details of the accounts can be found in the Merchandise section of the Treasurer's report.

As well as trying to keep the website merchandise details up-to-date, we updated the printed list in November to take account of changes in stock. We also took the decision, as part of the drive to save printing and postage costs for the Autumn Mailing, not to include a printed list. The current list, available on the BPS website, boasts a range of nearly 30 items and a total of over 50 individual products, but we always welcome ideas for new items.

HORTICULTURAL INFORMATION ADVISER – Matt Busby

I had another quiet year with no queries by post or the internet but as I prepare this report, I realise that a great deal of information is given during face-to-face contact with members. This is the most satisfying way to provide help because it gives me the chance to meet members old and new, and it is also a two-way exchange, enabling me to learn by listening to members' problems. Unfortunately, however, I am not able to get to many meetings these days.

I look forward to the coming year, hoping that members will contact me by whatever means about their problems or queries concerning their ferns and fern growing.

ARCHIVIST – Michael Hayward

All of the printed photographic material in the archive, over 1,000 items, has now been scanned and images can be readily retrieved on demand. If you are looking for an image of a particular fern variety or of a particular individual then do contact me by e-mail. A number of requests for images of old fern varieties were received in 2017. There is a wealth of correspondence in the archive and most of the early material has now been scanned, at the same time taking the opportunity to add more details of the subject matter to the index.

Material added to the archive during the year included a number of photographs. Good photographs of members, old and new, are always of interest, provided that they are annotated with the names of the subjects. A copy of Linton's *Ferns of the English Lake Country*, signed by the founder member of the Society, Robert Whiteside, was donated by Alan Ogden.

I am, as always, very grateful to the staff of the World Museum Liverpool for hosting us and to Alison Evans for continued assistance in sorting the material in the Society archive.

CULTIVAR REGISTRATION SUBCOMMITTEE – Martin Rickard

The job of producing cultivar registers is proving to be extremely time consuming and complicated. In the past year some progress was made on both the *Polypodium* and *Osmunda* registers but both are probably still some years from completion.

I have been asked: What is a cultivar register? Put simply, it is an alphabetical list of cultivars of a given species or genus. To create this list it is necessary to establish the correct name for every cultivar, involving finding the first given 'legal' name applied within the rules of the *International code of nomenclature for cultivated plants* (ICNCP) – first published in 1953, the ninth edition came out in 2016. This is not straightforward, requiring a good understanding of the ICNCP and other codes, all substantial volumes, and opinions will quite possibly differ. Once legal names are agreed, synonymy has to be sorted out. Unhappily, once finished, mistakes will surely be recognised, or opinion will change, or the rules will be modified, necessitating periodic revisions. The eventual register should be a useful guide to the true name for each cultivar but it will not be a descriptive monograph.

OBITUARIES

Peter John Campion 1943 – 2017

The story goes that Peter was born to the sound of bombers going to bomb Sicily. His love of nature goes right back to his schooling at Bishop's Stortford College, where he was one of the founders of the Natural History Hobby club. David Allen, who spoke at his funeral, remembers him sectioning and identifying petrified stems of sedges from a pre-historic village being washed out of the mud at Walton-on-the-Naze.

He was a man of wide interests. A committed Christian, he devoted a lot of time to West Runton, a Christian organisation under the auspices of the Scripture Union, providing holidays for children. He was churchwarden for St Paul's Church in Onslow Square and later for Crosthwaite Church, near Keswick where he lived. He was an expert on clocks and left a table covered with clocks that he was working on, which Sarah has managed to deal with. He was a competent and well-informed amateur naturalist.

He married Sarah in 1970 and they lived in Chelsea. He was a Chartered Surveyor, working for Richard Ellis in the City office, but because he wanted their children, William and Ruth, to be brought up in the country they moved to a village near Chelmsford. This meant commuting for the rest of his working life, initially by train, later by motorbike.

That is how I first remember him, arriving on that motorbike to meetings of the North-West Fern Group of our Society (which he joined in 2005). He had a collection of ferns in his garden at Bassenthwaite, tried to sort out the *Dryopteris affinis* complex in his local woods, enjoyed the flora, particularly on a holiday in New Zealand, and became Secretary of the Group for nine years. His fern books are being sold partly for the benefit of the Group.

He was a lovely, gentle, dedicated man – we shall miss him.

Robert Sykes (with help from Sarah Campion)

Michael Craddock 1945 – 2017

It is with much sadness that I report the death of Mick Craddock in February 2017. Mick and Linda joined the Society in 1990 after visiting my home in Coventry. He was a keen palm grower and loved raising exotics from seed. I recall them going home with half a dozen ferns from the garden and that was the start of his passion for ferns.

His front garden was chock-full of ferns shaded by palms. Much of the rear garden, with greenhouses, ponds and a shady pergola, was given over to the production of ferns from spores and bulbils, and Mick used to have the National Collection of *Davallia*. A visit to their home in Ampthill, Beds was an education even for the most experienced grower. The 2016 *Bulletin* has a fuller description of their garden from the last East Anglia Group visit.

Mick and Linda frequently attended the Society's national and local meetings. During 1995, they took over looking after the Society's Merchandise from Anthony Pigott and ran it most successfully until 2001. A London taxi driver by profession, Mick was always the most excellent company. With Mick's passing we lose a most dedicated and competent pteridophyte propagator and a good friend.

Our most sincere condolences to Linda, and to daughters Barbara, Julie and Trisha and their families.

Matt Busby

John Donald Lovis 24 April 1930 – 5 September 2017

John Lovis was born in Clapham in England, and had an older brother, Frank, to whom he remained close throughout his life. As with many children of that time and place, John's early secondary school years were dominated by the Second World War, and the need to spend lengthy periods in air-raid shelters. However in his sixth form year at Whitgift School in Croydon, Surrey he was fortunate to come under the tutelage of Cecil Prime, a teacher of remarkable ability. John had always had an interest in insects, and anticipated becoming an entomologist, but his future took a defining turn when he was introduced to botany, chromosomes and the secret life of plants.

He went on to Queen Mary College at the University of London to study Botany. There he met Joan Valerie van der Smagt, and they married in 1953. Valerie had been born and bred in Ceylon – her mother being a Dutch Burgher and her father a British tea planter. John developed an enduring interest in Sri Lanka and they spent time together in the country on more than one occasion.

After graduating, John moved to the University of Leeds where he did his PhD with the formidable Professor Irene Manton, who had pioneered research on the cytology and biosystematics of European ferns. Appointed to the Chair of Botany in 1946, but hindered by the war years, Manton published her accumulated results in 1950 in the seminal work *Problems of cytology and evolution in the Pteridophyta.* This inspired a generation of British and overseas students to work with Manton during the next two decades and extend their fern research world-wide. John was just one amongst a group of young British students that included Stanley Walker, Molly Shivas, Trevor Walker, Tony Braithwaite and Anne Sleep, working alongside overseas students such as Jagadananda Ghatak, Gopinath Panigrahi, Sisir Roy and Gabor Vida. Manton herself teamed up with Arthur Sledge for a University of Leeds expedition to Ceylon where, in a single visit, they made cytological samples of 70% of the fern flora.

John Lovis with Gabor Vida and Irene Manton at Leeds in 1964

John chose to work on *Asplenium trichomanes* for his PhD – an extremely variable and widespread species throughout the northern hemisphere. Very quickly he discovered that it was even more complex than he had realised because Garth Brownlie at the University of Canterbury, who had pioneered fern cytology in New Zealand, published a chromosome count showing that it was hexaploid in New Zealand – quite different to the diploid and

tetraploid populations in Europe. So, John applied for and won a DSIR Postgraduate Fellowship to study in New Zealand for a year. He and Valerie set sail in 1955, narrowly avoiding national conscription that was still in force in Britain at the time. They were met in Wellington by an enthusiastic Lucy Moore, Assistant Director of Botany Division, DSIR, who had a car (a rarity in the New Zealand of 1955), and who offered to take them wherever they wanted to go. They headed for the limestone country of Hawkes Bay, and practically the first plants that John collected later turned out to be tetraploid. Everywhere else in New Zealand the plant is hexaploid. In fact, even now, very few plants of this tetraploid form have ever been found, and few botanists have seen it in the wild. Unfortunately accurate documentation of collections was not common practice in the 1950s, and John was just off the boat, had no proper maps and certainly no GPS, so the exact locality where he found the plant remains unclear to this day. Nevertheless John had a very successful stay in New Zealand, developing a strong desire to return. He stopped in Australia on the way home and found all three cytotypes growing there, albeit the hexaploid only from a single population.

Using this plethora of new data to good effect, John was able to submit his PhD in 1958. Thereafter he was appointed to a lectureship at the University of Leeds and so began perhaps the most productive period of his career. He quickly established good working relationships with people such as Clive Jermy at the Natural History Museum in London, and with European collaborators such as Helmut Melzer, Helga and Kurt Rasbach and, above all, with Tadeus Reichstein – a Nobel prize winning organic chemist from the University of Basel who in his retirement had taken up the study of fern cytology. Almost half of John's published papers came in the next 20 years at the University of Leeds where he and his collaborators unravelled the complexities of evolution through hybridisation and polyploidy in the genus *Asplenium.* Amongst many other achievements, he was able to effect the first artificial reconstruction of a naturally occurring polyploid fern, *A. adulterinum*, and later to synthesise a completely new and artificial alloploid species unknown in the wild. This work culminated in his *magnum opus* – 'Evolutionary patterns and processes in ferns' – published in *Advances in Botanical Research* in 1977, which summarised all the work that had been done up to that time based on cytology and breeding systems in ferns. In 1978, he was awarded the degree of Doctor of Science from the University of London, recognising his tremendous contribution to our understanding of fern evolution.

It was also at the beginning of this period when his two children, Graham and Pamela, were born. Their modest house in Headingley was a fascinating place to visit because, in addition to the usual paraphernalia associated with young children, John retained his interest in insects, breeding moths in their dining room, keeping numerous cats and beginning to accumulate the piles of pressed ferns in newspaper that became a hallmark of his occupation wherever he went.

It was in 1967, as a very naïve second year student at Leeds, that I first met John. The Botany Department in those days was broadly based, providing an excellent all-round course in many disciplines. But, for me, it was John's courses in plant taxonomy, evolution, and especially in plant biosystematics, that took Botany to a new level. I was fascinated by the ways one could study evolutionary origins by growing plants in experimental gardens, conducting artificial crosses, and looking at chromosomes to investigate polyploidy and species relationships. John was a knowledgeable, patient and inspiring teacher with a very dry sense of humour.

In those days we had extensive practical labs. We learned how to use keys and classify flowering plants based on floral diagrams. We had regular field courses to various parts of England. In the third year we had a field course in the mountains of Yugoslavia. John was always one of the leaders on these trips, and we learned a huge amount, both from his

knowledge of European plants, and in long informal conversations in the evenings. The Yugoslavian trip was almost sabotaged when we came across a bunch of Yugoslav partisans enthusiastically celebrating some of their war-time exploits. Protocol demanded that our leaders participate in the celebrations, quickly resulting in some seriously impaired lecturers. Somehow John was the only one who managed to stay sober and safely extract us all from further damage.

When I decided to do a PhD, I wanted to work on the cytology and biosystematics of European ferns and I became the first of John's students, and amongst the third generation of fern systematists at Leeds (which, with John's involvement, has now expanded to fourth and fifth generations in New Zealand). John introduced me to a wonderful experimental garden, deep in the heart of Headingley. He patiently taught me how to grow ferns, collect spores, generate prothalli, make crosses, and undertake the whole intricate process of generating chromosome preparations and working out the relationships of European *Asplenium* species. He introduced me to his European collaborators, leading to trips to the Italian Abruzzi region and to the island of Crete.

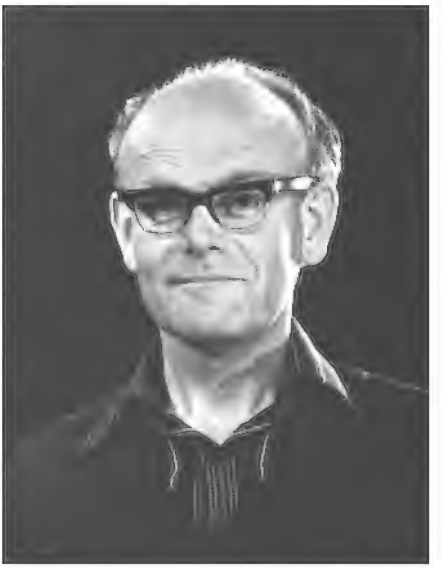


photo: University of Canterbury

John Lovis at University of Canterbury

When the time came to find to find a job, John had no hesitation in recommending that I go to New Zealand if the opportunity arose, and in 1973 I took up a postdoctoral Fellowship at Victoria University of Wellington, and eventually a permanent position at the National Museum. When the Chair at the University of Canterbury became vacant in 1977, the chance for John and Valerie to move back to New Zealand was too good to miss, and they subsequently travelled across the world and settled in Christchurch. Although the move effectively marked the end of the Leeds University school of fern research, there were opportunities for John and I to work together again; we published a checklist of New Zealand ferns, a list of chromosome numbers for ferns, and papers on *Tmesipteris* and a new species of *Pellaea*. John's work also expanded into biogeography, and he briefly locked horns with the exponents of panbiogeography and vicariance biogeography who were very vocal in New Zealand in the late 1980s. More satisfyingly, he spent a lot of time botanising on the Port Hills and Banks Peninsula close to Christchurch, eventually publishing several papers expanding the known fern flora of the area. He also undertook many field trips with Jo Ward, his partner in the latter part of his life, looking for everlasting daisies that were the subject of her research. However, although he had Honours students at this time, notably Martin Daellenbach and Tony Huber, he trained no further PhD students in fern biology.

In fact, he changed tack once again and became involved in fossil botany, spending more and more of his time in the Clarence Valley and other parts of Marlborough and Canterbury where there was a rich Cretaceous fossil flora. John had always been interested in fossil botany, being well-acquainted with the Jurassic flora of North Yorkshire, and the work of his colleagues at Leeds on this and other deposits. He had even published a paper himself on *Aspidities thomasii,* a fossil fern that he related to the family Thelypteridaceae. In New

Zealand, he became a serious palaeobotanist, supervising two postgraduate students, Ian Daniel and Liz Kennedy. Their work generated massive numbers of specimens, these initially vying for space with the tottering heaps of newspaper containing ferns, but they have since found permanent repositories in the Canterbury Museum and the Institute of Geological and Nuclear Sciences, Lower Hutt. Undoubtedly the highlight of this work was the discovery of a Cretaceous angiosperm flower, something never before found in New Zealand. Significantly, the School of Biological Sciences at Canterbury University listed him as "Emeritus Professor Palaeobotany", indicating that he was better known there for his work on Cretaceous fossil plants than for his expertise in fern evolution.

In fact, John was one of an increasingly rare breed in University circles – a true polymath. He researched and taught University undergraduate courses in every aspect of botany, completing the full range shortly before his retirement with an advanced course in phycology. At postgraduate level, while fellow academics were content to provide part of a single course, he ran four on Pteridophytes, Palaeobotany, Evolution and Biogeography entirely on his own.

I was immensely fortunate to come across someone like John in my formative years. In the 1960s, at Leeds, his work was innovative and inspiring. He gathered a small group of budding biosystematists around him and gently steered us in the right direction, instilling in us the need for nit-picking accuracy in everything we did in the lab. He had a keen eye in the field, and a reputation for finding interesting fossils amongst the discard piles of his colleagues. But he was the world's worst procrastinator – sadly much of his work on New Zealand *Asplenium trichomanes* is still not published, and may need to be completed by those with access to his collections.

He was a man of many talents – in his younger days a handy left-arm spin bowler in school and university cricket teams, a surprisingly good goal-keeper in hockey, and a tenacious conservationist who almost single-handedly saved the lady's slipper orchid from extinction in Britain. He was a serious student of wines, collecting and learning about them from his undergraduate days onwards; he ran wine appreciation courses for Canterbury University's Department of Continuing Education, and sometimes took part in competitive tastings. He was equally devoted to quality and excellence in his other passions including philately, photography, rugby, classical music, cheese, Ceylon tea and growing species of *Fritillaria.* He passed on to his children Graham and Pamela a love of science, plants, and an inbuilt love of collecting.

But one of my abiding memories of John is that, despite mastering at least two quite different academic disciplines and several different hobby interests, he never owned a computer in his life. He usually communicated by letter in an elegant and distinctive hand, only rarely condescending to send a note written on a type-writer. He was certainly never driven by numbers of publications, citation indices, the need to attend frequent conferences, or even the need to maintain an up-to-date *curriculum vitae.* In fact, he pursued whatever stimulated his interest, and always to the very best of his considerable abilities, developing expert knowledge in many disparate fields. He was a wonderful mentor to anyone whose interests intersected with his own, and even after his own contributions had ceased, he never lost enthusiasm for hearing about the discoveries that others were making.

He lived a full, happy and healthy life, apart from knee problems, which frustrated him greatly as they reduced his mobility in the last part of his life. In the end, after a short illness, he was overtaken by kidney failure and died peacefully at Nurse Maude Hospice, Christchurch in the company of his daughter Pamela and partner Jo. He had been alert and attentive until the last couple of days, living at home, continuing his passion for wine and enjoying his friends and family. He will, of course, be sadly missed by them, but also by pteridologists and palaeobotanists around the world.

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Patrick Brownsey

Memories of John Lovis

Like Patrick, I too was an undergraduate in the Department of Botany at Leeds, and first benefited from John's lectures and practical classes when I was a new student in 1967. Of particular significance was a letter I received at my digs (no email then!) in Leeds just towards the end of the summer term; John explained that there was one space left on the planned summer field course to Yugoslavia, and he was offering the place to one of the first year students on a first come, first served basis. His eyes were twinkling when he opened his office door the next morning – "I was expecting you", he said! This was my first introduction to fieldwork and botanising with John, in the memorable visit to the Julian Alps that Patrick has described above. In a later fieldtrip with John, the group spent a week based at Old Brathay, then a field study centre near Ambleside, and it was here that my interest in ferns really developed. I was impressed with John's careful documentation and recording of plants, employing the classic Swiss Army penknife as a standard measure in photography, as well as using the various blades, scissors, bottle openers etc. I have had one with me on fieldwork ever since.

In my final year at Leeds I did a special option on fern biology, taught by John and by Dr Anne Sleep. Only two (out of about 10) students chose this option, but we were joined by another student, Christopher Fraser-Jenkins, who had just started a PhD at the University of Leicester and came over to Leeds especially to learn fern cytology with us at the hands of the experts. And then, before moving to Liverpool to begin my PhD research on *Dryopteris*, John kindly introduced me to the practical techniques of spore cultivation and fern hybridising (as described in his 1968 paper), and I was able to transfer my newly-developing cultures to their new home at Ness Botanic Garden.

Much later, in the early 1980s, I was approached by Professor Manton for help in completing the manuscript for the publication of 'The cytology of the ferns of Madeira'. She had visited Madeira in 1949 but although documenting the cytology of many of the species of the island, had not published other than a rudimentary list of results in her 1950 book, *Problems of cytology and evolution in the Pteridophyta*. Completion of the manuscript required lengthy correspondence with John in New Zealand, as he had made two very successful trips to Madeira in 1969, with Professor Reichstein, and again in 1970, and left critical specimens and photographs amongst his extensive collections that were deposited at the BM after his departure. We received lengthy, handwritten letters in his very characteristic script on several sheets of flimsy airmail paper that provided the vital information on each photograph and specimen that was needed for the manuscript, and the joint paper was finally published in 1986.

John Lovis was a member of the BPS for 62 years, having joined in 1955. He served on the committee from 1966 to 1970 and several of his publications appeared in the *British Fern Gazette* / *Fern Gazette*. John's fern collections from his time at Leeds are at the Natural History Museum, London (BM).

Mary Gibby

Tim Pyner 1958 – 2018

Tim died peacefully on January 17th 2018 in Fairhaven Hospice after struggling with cancer treatment. We are all shocked and saddened to have lost such a valuable and likeable colleague and friend and send our deepest sympathy to Beverley and his family. Tim had been with his partner Beverley since 2000; they married in Southend Hospital on 13th November.

photo: A. Leonard

Tim Pyner with *Asplenium jahandiezii* in Vercors, France, 2015

He had been a member of the Society since 1984 and started coming to meetings regularly around 2002. He had a passion for all plants but I think he found ferns particularly interesting and challenging, both in terms of their taxonomy, their distribution and their cultivation. For the majority of his working life Tim was involved with horticulture and until four or five years ago, when he took early retirement, he had been in charge of parks and gardens for Southend Borough Council. Tim was a keen traveller and came on fern excursions whenever he could fit it in with his working life. On his trips he would research the area thoroughly and acquire all the relevant books before he went and then scour the countryside looking for the rare and unusual local flora. Since his freedom in retirement he travelled even more with his partner Beverley, all over the world; I've lost track of all the places they visited.

As soon as Tim told me that he had decided to retire from full time employment I bought him lunch at RHS Hyde Hall during one of our BPS days and persuaded him to come onto our committee. This was indeed a good move as Tim proved to be an active and purposeful, well measured member. He made some very useful contacts with nurseries, botanic gardens and other fern societies and organised many successful indoor meetings as well as advising and participating in BPS events and shows including RHS Chelsea in 2016. He also took charge of the BPS East Anglia Group, hosting the group at least once a year at his house and garden and co-ordinating many interesting and varied field meetings.

Tim had many qualities. He was unassuming and thus very approachable. Many BPS members describe him as having an encyclopaedic knowledge of ferns (and most other plants) that was truly amazing but he never appeared patronising. How did he remember it all? On field meetings you could always rely on him to identify any wild plant; if it was rare or unusual and he didn't immediately know what it was he would say "leave it with me" and the next day, after consulting his many floras, he would come up with an ID. The only time I saw him really foxed was on our fern hunting excursion to China where we saw so many ferns (240 plus in Yunnan) that even Tim was at times overwhelmed.

Sometimes you didn't thank him when he toured your garden and inspected your fern collection. Just when you thought you'd got it sussed he would quietly tell you that something was misnamed or that the dreaded fern smut moth had arrived. But you didn't mind because he knew what he was talking about. Tim kept up to date with all changes in taxonomy. Revision of the *Blechnum* group is a good example; most of us are still struggling with this! He was also keen to establish the true identity and correct names of

ferns in cultivation and available through nurseries, etc. His research was thorough and he often consulted specimens at the Natural History Museum herbarium before publishing valuable articles in the *Pteridologist* and *The Plantsman* as well as blogs on the BPS website.

Tim's garden was relatively small but a tour could easily take two hours or more. It was stuffed with interesting plants, all of which, of course, were species. It was well known that Tim didn't really approve of fancy fern cultivars; their fanciness might elicit a raised eyebrow or, at worst, small tuts of disapproval, but this was all part of his charm. He made the most of his small patch by planting his back garden in layers; small trees and palms under-planted with shrubs, then ferns, with unusual flowering perennials planted around the perimeter. Many of his interesting ferns, notably xerics, were grown in a range of containers and sinks placed around both the front and back of his house. His front garden was a succulent-lovers paradise, transporting you to exotic desert environments. There were plants from all over the world in his garden but not a single label; every plant name was in Tim's head! Some of my most treasured plants were gifts from his garden.

Tim was a very good and supportive friend to me personally. He always kept in touch and when I was down in Suffolk visiting my mother he would suggest a trip to Cambridge Botanic Garden or to a nursery for a break and come up from Southend for the day. He made the journey up to Hull on several occasions when I couldn't travel because of illness, usually bringing an interesting plant to cheer me up! Roland and I had a very memorable trip with Tim that involved him driving us all around the Scottish botanic gardens, nurseries in south-west Scotland and visiting the gardens of several BPS members who also put us up. What a trip! This is one of the things I love about BPS; it's not just about ferns but also the people who love them. Tim and Beverley have put me up on many occasions at their home, looking after me very well and enabling me to attend many meetings down south.

There was standing room only in the chapel at his funeral on 15th February. Around 25 BPS members attended and there must have been approaching 200 people in attendance. Tim organised his own funeral, which was an incredibly brave thing to do. It included his own words about his background and his outlook on life and revealed an interesting taste in music of which most of us were unaware! He was full of surprises even at his own funeral. What I will particularly value from his words are his thoughts about the BPS:

'Although I have a few old friends that I met mainly through Gill (Tim's first wife and mother of daughter Morgan), I would not call myself particularly sociable and outgoing. However, since Gill died I have become particularly attached and happily involved with the Fern Society (officially known as the British Pteridological Society). I am not entirely sure why, as I belong to other similar botanical societies. I suspect that it is the members who have such a wide range of interests besides a love of ferns in particular. It is the latter that brings us together and the friendliness, intelligence, humour and diversity that holds us together.'

We will all miss him in the BPS as will the fern world. Many of us have so many good memories of time spent with Tim. What a loss. He is irreplaceable.

Yvonne Golding

Farewell to a wonderful man

Before I met Tim Pyner I would sometimes hear my UK friends (in the midst of a debate) say "Well Tim says…" When I finally met him I understood why. Tim had an encyclopaedic knowledge of ferns and a magnificent garden as his reference library. Everything was there, with displays from xerics to tree ferns, all perfectly sited for their habitat preferences. Furthermore Tim was always kind, friendly and willing to share his knowledge. Have a question? "Yes, ask Tim" and he would give the important details to make identification easier and, importantly, more memorable.

Martin Rickard kindly took a group of his American friends on a number of outstanding tours of fern gardens in the UK and Ireland. Of course Tim's was one of them and was certainly a highlight both for education and fun. We soaked up knowledge in the garden, "What *Blechnum* is that?" and then were graciously treated to refreshments and lively conversation as the visit came to an end all too soon.

In the following years, thanks to the convenience of e-mail, we were able to carry on our discussions and exchange thoughts and ideas. As always Tim was very helpful and it was fun to 'chat' with him.

Thank you Tim. I will miss you immensely.

Sue Olsen

John (Jack) Robert Schieber 1925 – 2017

Jack Schieber joined the Society in 1998. In 2002 he visited Great Britain with Rose Marie, his wife, and contacted me to ask if there was a meeting they could attend. By chance there was, in Teesdale, County Durham. I drove up to that meeting with Paul Ripley. Jack and Rose Marie were there and he introduced himself. We had a splendid weekend together, and Paul and I were able to show Jack the differences between our native ferns. We were surprised that he already knew quite a few of them; it turned out he was a great fern grower.

Some years later the BPS and the Hardy Fern Foundation of Seattle were starting to develop a closer union for meetings. After a successful one in Seattle, John Scott offered one in Pennsylvania. Jack and Rose Marie were part of this and we went back to their beautiful house for dinner one day followed by a tour of his wonderful garden. I can still remember what a delight it was and especially a bed in the back lawn that was filled with beautiful ferns with a centre-piece of the statuesque *Dryopteris* × *australe*. It has taken me many a year but through a mutual friend, Naud Burnett of Casa Flora Nursery, I now have a specimen but fear it may be a year or two before mine reaches the size of Jack's.

We met again on trips to Germany, Texas, California and the south-eastern United States. Our most exotic trip was to Costa Rica, where we were all lost by the sheer number of ferns we saw each day. Jack, Paul and I shared an apartment for the fortnight and Jack was always interested to watch Paul and I either identifying the day's specimens or arguing about the pictures that we had taken, before we all set off for the evening meal. We had such fascinating conversations on the contrasting ways of life in Britain and America and generally putting the world to rights. Jack negotiated a day off to go kayaking with a friend.

I did not know exactly how old Jack was then but he still did other wilderness trips with his son. I had not seen him since our fern tour of the Appalachian Mountains but we kept in touch. In 2012 he e-mailed me to ask if I could send him a picture of a typically English country pub. Locally we have the Old George, Shoreham, Kent which is often used in one brewer's television adverts, so I went across to photograph it for him. Jack used this image to build a set for the Delaware Valley Fern and Wildflower Show in March 2013. The Old George became The Fern and Fox Inn. He sent me some pictures and then wrote a short article for the *Pteridologist*.

We are so sad to hear of his passing, but are strongly of the opinion that our most humble, fun-filled and generous friend had led a very adventurous and extremely full life until the very end.

We have subsequently heard of the death of Jack's wife of 70 years, Rose Marie. She was a loving and supportive wife and mother, and often accompanied Jack on his fern trips.

Pat Acock

Raymond John Smith 1928 – 2017

Ray Smith's interest in growing ferns dated from the mid-sixties, but how or why this interest developed was never explained to me. We first met across the bench of a display of ferns while I was attending my first BPS stand at the National Daffodil Association show at Notcutt's Garden Centre at Monkspath, Solihull on the weekend of the 19th-20th April 1975. Apparently, Ray was convinced that he was the only person in the UK who had an interest in acquiring and growing ferns. He had never heard of our Society.

That weekend coincided with an article in The Birmingham Evening Mail about the Society and me, and my passion for growing ferns. Years later Brenda Smith related to me the story about the moment they discovered that Ray was not alone in his interest. While browsing through the newspaper that Saturday evening, Brenda suddenly exclaimed to Ray that there was a fellow in the paper who was passionate about growing ferns and that he had a stand at Notcutts that weekend. Early on Sunday morning Ray and Brenda presented themselves at my stand full of questions about the ferns on display, how Ray might acquire more ferns, the problems he was having with some of his ferns and many questions about our Society. They joined on the spot. From 1994 until 2001, Ray and Brenda took charge of the Society's Plant Exchange.

photo: A.R. Busby

Ray Smith in his garden with two *Polystichum setiferum* 'Smith's Cruciate'

Ray was born in Birmingham in 1928 but his schooling locally was interrupted by being evacuated to Ashow near Leamington Spa in the early years of the Second World War. In 1947 he was called up and joined the Royal Air Force where he was trained as a radio operator, beginning an interest he had throughout his life. On leaving the service, he worked at the Rover Car Company (now JLR) and was there for forty years. In addition to his interest as a 'radio am' – Ray was a keen and active member of the Radio Society of Great Britain and devoted a room to his radio equipment, he was also an enthusiastic member of the Birmingham Astronomical Society, participating in the construction of several telescopes and a new observatory near Birmingham.

It would be difficult to find a more amiable and affable man. Many of us will have fond memories of time spent in his company at local and national meetings and on the Society stand at Southport and other shows, not to mention enjoying Ray and Brenda's generous hospitality during meetings at their home and garden. We can be comforted in the thought that we will always have 'Ray Smith' in our gardens [= *Polystichum setiferum* 'Smith's Cruciate'].

Our most sincere condolences go to son Roderick and daughter Melanie, daughter-in-law Annie and grandchildren Matthew, Edmond and Jessica.

Matt Busby

Gwladys Tonge 1920 – 2017

I was saddened to learn of the death of Mrs Gwladys Tonge. Gwladys joined our Society in 1974 and continued as a member until 2001, with a brief break from 1997 to 1999. Shortly after she joined, I recall being invited to visit her garden, then at the Old Post Office in Withybrook, Warwickshire. She was a keen and knowledgeable plantswoman, whose later small but splendid garden in Wilmslow, Bucks featured in one of the popular gardening magazines in the 1990s.

Gwladys was a child in Belfast, whose accent she kept throughout her life! Her interest in gardening was aroused by childhood visits to her grandmother who lived at Killough on the south-eastern coast of Northern Ireland. Gwladys loved the Killough garden, which was nothing special by professional standards. She also loved experimenting with sowing seeds – flowering plants unfortunately! From these very early beginnings in the 1920s and 1930s Gwladys developed into a universally respected amateur gardener. Her gardening autobiography, *A gardener's progress*, was published by Faber and Faber in 1974. It is still a highly recommended good read. Many details of her life in gardens are recounted with typical Gwladys good humour.

Nigel Hall summarised Gwladys's horticultural high points in the *The history of the British Pteridological Society*, BPS Special Pub. No.4, 1981. I paraphrase him here:
BPS President from 1985 to 1988, only the second woman President of the Society. She was a keen plantswoman who had also been Chairman of the Hardy Plant Society and a very active member of The British Ivy Society. She was an accomplished artist, exhibiting at garden centres and RHS shows – winning a Gold Medal.

In later years, hearing became a serious problem and perhaps made her feel cut off from the many friends she had made in her Societies.

We send our most sincere condolences to her family and many friends.

Matt Busby

David Adam Walkinshaw 1937 – 2017

David's botanical interests were wide-ranging. As a student and recent graduate he sent many new records of lichens to experts at the Natural History Museum, mainly from Scottish mountains and also from Ireland. His knowledge of ferns and alpines also grew at this time. He later studied fungi and myxomycetes, so any trips abroad or in Britain produced interesting finds.

I first met Avril and David Walkinshaw in Cadaqués, north-east Spain, in March 2005. The seven meeting participants were arriving via different routes and had agreed to meet in a seafront restaurant the night before the expedition. Andrew Leonard, our leader, in his unique way said to David "Do you think you will be up to this trip?" David's immediate unfazed reply was "I'll have you know I have climbed close to two hundred Munros." His explanation that these were mountains in Scotland over 3,000 feet high confused Andrew, who thereafter called David, Mr Munro.

David and Avril turned out to be very fit and also amiable company. A couple of years later we met up again in the Alpes Maritimes above Nice and we certainly needed to be fit on the mountains around our hostel. The following year they joined us on the Costa Rica trip. After a few days Avril told me that David had picked up a bug and they would stay behind that day. Klaus picked up on the situation and decided it might be better if we all took the day off, which would give us a chance to explore the capital San José. Next day David was back to his bright normal self. I approached him about writing up one day for the report; he felt he was not up to it but with Avril's encouragement he wrote a most charming account of the day, which seemed to capture the poetic way he had with words whenever he spoke.

In 2012 we had a splendid time together on the trips to South Africa and to Germany and Austria. However, descending from the Eagle's Nest above Berchtesgaden in Germany we became separated, slightly worrying since David was now suffering from diabetes and needed to take some sugar. In all the time I had known him this was the only time I saw him run out of energy.

During the years we caught up by occasional e-mails or when I ventured north of the border to various fern events. David was always interested in my projects at the Natural History Museum and often sent me useful specimens from various places in Europe. We shall sorely miss his wonderful droll sense of humour, his wonderful teasing way with words and his delight in being with people, interested in all we did together.

Pat Acock

MEMBERSHIP LIST: ADDITIONS & AMENDMENTS

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** new members 2017, ** new members 2018, # members rejoined 2017, ## members rejoined 2018*

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CONSTITUTION
OF THE BRITISH PTERIDOLOGICAL SOCIETY

Registered Charity No. 1092399

Adopted at the Annual General Meeting on 5 April 2008 (with amendments 2017)

1. NAME

The Society shall be called "The British Pteridological Society".

2. OBJECTS

The objects of the Society are to promote all aspects of pteridology by encouraging the appreciation, conservation, cultivation and scientific study of ferns, horsetails, clubmosses and quillworts through publications, meetings, the provision of grants and other appropriate means.

3. MANAGEMENT

3.1 The Officers of the Society shall consist of a President, a President-elect, for one year before his/her term as President, up to six Vice-Presidents, a General Secretary, a Committee Secretary, a Treasurer, a Publications Secretary, the Senior Editors of the Society's regular publications and the Society's Web Site, a Membership Secretary, a Meetings Secretary, a Conservation Officer and such others as the Society may appoint from time to time. All posts are honorary.

3.2 The Management of the Society shall be in the hands of a Committee consisting of not more than ten elected members with the addition of the Officers of the Society. Eight members, including at least two of the President, the General Secretary, the Committee Secretary and the Treasurer, shall constitute a quorum. The Committee shall have the power to co-opt additional members, who shall retire at the next Annual General Meeting.

3.3 Any holder of a Committee appointment, such as Spore Exchange Organiser, Plant Exchange Organiser, Merchandise Organiser, Booksales Organiser, or Archivist, who is not also either an elected Officer of the Society or an elected Member of the Committee, will be eligible to attend Committee Meetings but will have no voting rights.

3.4 The election of Officers and members of the Committee shall take place at the Annual General Meeting. Terms of office shall be as follows:

3.4.1 President: three years, not eligible for re-election in the following three years.

3.4.2 The President-elect will be elected to the presidency one year before the expiry of the term of the current President, and will serve that one year as President-elect before taking up office.

3.4.3 Vice-presidents: three years, eligible for re-election.

3.4.4 All other officers: one year, eligible for re-election.

3.4.5 Elected members: one year, eligible for re-election, up to a maximum of five years, thereafter eligible for re-election after a lapse of one year.

3.5 Nominations for Officers and members of the Committee must normally be received by the Committee Secretary ten days before the Annual General Meeting.

3.6 A resolution in writing signed and agreed to by all members of the Committee for the time being in the United Kingdom shall be as valid and effectual as if it had been passed at a meeting of the Committee duly called and held, and may consist of several documents in the like form each signed by one or more members of the Committee.

3.7 The Committee may fill any casual vacancy amongst its Officers or Committee members until the next Annual General Meeting.

3.8 All Committee members shall be Trustees of the Society within the meaning of the Charities Act 1993 (or any statutory modification or re-enactment of that Act).

4. POWERS

4.1 In furtherance of the objects but not otherwise the Committee may exercise the following powers:

4.1.1 to raise funds and to invite and receive contributions provided that in raising funds the Committee shall not undertake any substantial permanent trading activities and shall conform to any relevant requirements of the law;

4.1.2 to buy, take on lease or in exchange any property necessary for the achievement of the objects and to maintain and equip it for use;

4.1.3 subject to any consents required by law to sell, lease or dispose of all or any part of the property of the Society;

4.1.4 subject to any consents required by law to borrow money and to charge all or any part of the property of the Society with repayment of the money so borrowed;

4.1.5 to employ such staff (who shall not be members of the Committee) as are necessary for the proper pursuit of the objects and to make all reasonable and necessary provision for the payment of pensions and superannuation for staff and their dependants;

4.1.6 to co-operate with other charities, voluntary bodies and statutory authorities operating in furtherance of the objects or of similar charitable purposes and to exchange information and advice with them;

4.1.7 to establish or support any charitable trusts, associations or institutions formed for all or any of the objects;

4.1.8 to do all such other lawful things as are necessary for the achievement of the objects.

4.2 An Executive Committee comprising the President, General Secretary, Committee Secretary and Treasurer shall have power to act on urgent matters arising between Committee meetings. The Executive Committee shall report its actions to the Committee at the earliest opportunity.

4.3 The Committee may appoint from its own body, with or without the addition of other members, such other committees as may be needed. The Committee may also appoint assistants to any Officer; such assistants shall be entitled to deputise for the respective Officers at meetings.

5. RECEIPTS AND EXPENDITURE

5.1 The funds of the Society, including all donations contributions and bequests, shall be paid into an account operated by the Committee in the name of the Society at such bank as the Committee shall from time to time decide. All cheques drawn on the account must be signed by at least two members of the Executive Committee.

5.2 The funds belonging to the Society shall be applied only in furthering the objects.

6. ACCOUNTS

The Committee shall comply with their obligations under the Charities Act 1993 (or any statutory re-enactment or modification of that Act) with regard to:

6.1 the keeping of accounting records for the Society;

6.2 the preparation of annual statements of account for the Society;

6.3 the auditing or independent examination of the statement of account of the Society; and

6.4 the transmission of the statements of account of the Society to the Charity Commission.

7. GENERAL MEETINGS

7.1 The Annual General Meeting of the Society shall be held at such time and place as the Committee may decide for the purpose of passing accounts, electing Officers and the Committee and transacting the general business of the Society.

7.2 An Extraordinary General meeting shall be called by the Committee Secretary within thirty days of receiving a request in writing from the Committee or from not less than twenty members stating the purpose for which such a meeting is required.

7.3 At least twenty-one days notice of any General Meeting shall be given to all members.

8. NOTICES

The accidental omission to give notice of a meeting to, or the non-receipt of notice of a meeting by, any member shall not invalidate any proceedings or resolutions at any meeting of the Society or any committee thereof except in the case of removal from membership.

9. ORDINARY MEMBERSHIP AND SUBSCRIPTIONS

9.1 The annual subscription payable by members shall be payable in advance and due on the First of January in each year, or on joining the Society.

9.2 The rates of subscription shall be fixed by a General Meeting from time to time.

10. HONORARY MEMBERSHIP

The Committee may elect any person or persons to Honorary Membership of the Society. Honorary Members shall be entitled to all the privileges of membership, but shall not be liable for payment of any subscription.

11. REMOVAL FROM MEMBERSHIP

11.1 Any member whose subscription is unpaid when due shall be liable to have his/her name removed from the list of members of the Society.

11.2 Any member whose conduct in the opinion of the Committee is prejudicial to the interests of the Society may be removed from membership by a two-thirds majority vote of those present at a meeting of the Committee on the Agenda of which the words "Removal of a Member" shall have appeared; provided no member may be so removed unless due notice has been sent to the member of the intention of the Committee to proceed under this rule and of the nature of the charges made and an opportunity has been afforded of answering such charges to the satisfaction of the Committee. A member so removed shall forfeit any claim upon the Society.

12. AWARDS

The Committee may make awards in respect of outstanding scientific or horticultural achievements in the field of pteridology.

13. ALTERATION TO RULES

13.1 Any proposal for alteration or addition to this Constitution shall be in writing, and shall be signed by twenty members, and be deposited with the General Secretary not less than thirty days before the Annual General Meeting or before an Extraordinary General Meeting called for the purpose. Such alteration or addition shall be included in the Agenda of that meeting and circulated to all members and shall not be carried unless the votes of two-thirds of the members present at the meeting are cast in favour.

13.2 No alteration shall be made which would have the effect of making the Society cease to be a charity at law.

14. DISSOLUTION

The Society may be dissolved by a vote of at least three-quarters of those present and voting at an Extraordinary General Meeting called for that purpose and if an effective resolution for dissolution is passed the surplus funds and property of the Society shall be disposed of to an agreed charitable organisation of similar interest.

MEETINGS PROGRAMME 2018

Meetings Secretary: Bryan Smith
Meetings Subcommittee: Bruce Brown, Roger Golding, Nick Hards, Julian Reed, Martin Rickard, Paul Ripley, Fred Rumsey

Sat. 14 April	**AGM & Spring Indoor Meeting - Natural History Museum, London** Leader/Contact: Bryan Smith/Alison Paul
Sat. 16 - Sun. 17 June	***Plant Society Show - RHS Wisley, Surrey: BPS Stand** Contact: Julian Reed
Sat. 16 - Sun. 17 June	***Cultivar weekend - Fibrex Nurseries, Pebworth, Warwickshire** Contact: Julian Reed
Sat. 7 - Sun. 8 July	**Weekend field meeting - Leicestershire** Leader/Contact: Paul Ripley
Wed. 11 - Mon. 16 July	**Field meeting - Holland/Belgium** Leader/Contact: Pat Acock
Sat. 11 - Sun. 12 August	**BPS Display weekend - RHS Wisley, Surrey** Contact: Julian Reed
Thurs. 16 - Sun. 19 Aug.	***Southport Flower Show: BPS Stand** Contact: Michael Hayward
Sat. 8 - Sun. 9 Sept.	**Weekend field meeting - Wensleydale, North Yorkshire** Leader/Contact: Bruce Brown
Sat. 17 Nov.	**Autumn Indoor Meeting - World Museum Liverpool** Leader/Contact: Nick Hards

Note: The Isle of Wight meeting previously advertised will no longer take place.

** Event supported by, but not organised by, the BPS.*

For further details of these meetings please see the Meetings Programme sheets sent to members with the Autumn Mailing and also available on the BPS website. For general enquiries about meetings, contact the Meetings Secretary (Meetings@eBPS.org.uk).

REGIONAL MEETINGS

These meetings are open to all members, so if you are visiting one of the following areas you would be very welcome to join in. For details of meetings please see the BPS website or contact the regional organisers by e-mail, or by post enclosing a stamped addressed envelope.

Cornwall & Devon	Ian Bennallick, Lower Polmorla, St Wenn, Bodmin, Cornwall PL30 5PE Cornwall@eBPS.org.uk
East Anglia	Peter Blake, 14 Mill Hill Road, Norwich NR2 3DP; EastAnglia@eBPS.org.uk
Manchester & N. Midlands	John Grue, Briarfield, Moss Lane, Broadbottom, Hyde, Cheshire SK14 6BD; ManchesterNorthMidlands@eBPS.org.uk
Midlands	Matt Busby, 16 Kirby Corner Road, Canley, Coventry CV4 8GD Midlands@eBPS.org.uk
North Wales	David Hill, 54 Grosvenor Avenue, Rhyl, Denbighshire LL18 4HB NorthWales@eBPS.org.uk
North-West England	Robert Sykes, 1 Moss Howe, Crosthwaite, Kendal, Cumbria LA8 8BW NorthWest@eBPS.org.uk
Scotland	Bridget Laue, 50 Liberton Brae, Edinburgh EH16 6AF; Scotland@eBPS.org.uk
South-East England	Julian Reed, 19a Northdown Road, Kemsing, Sevenoaks, Kent TN15 6SD & Peter Clare; SouthEast@eBPS.org.uk
S. Wales & Borders	Brian Dockerill, 19 Westfield Road, Glyncoch, Pontypridd, Mid-Glam., CF37 3AG; SouthWalesBorders@eBPS.org.uk
Wessex	Jo Basil, 14 Royden Lane, Boldre, Lymington, Hants. SO41 8PE & Andrew Leonard; Wessex@eBPS.org.uk
Yorkshire	Barry Wright, 130 Prince Rupert Drive, Tockwith, York, North Yorks. YO26 7PU; Yorkshire@eBPS.org.uk

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